Memo To The
New President...p. 50

November 14, 1960

RAILWAY AGE *weekly*

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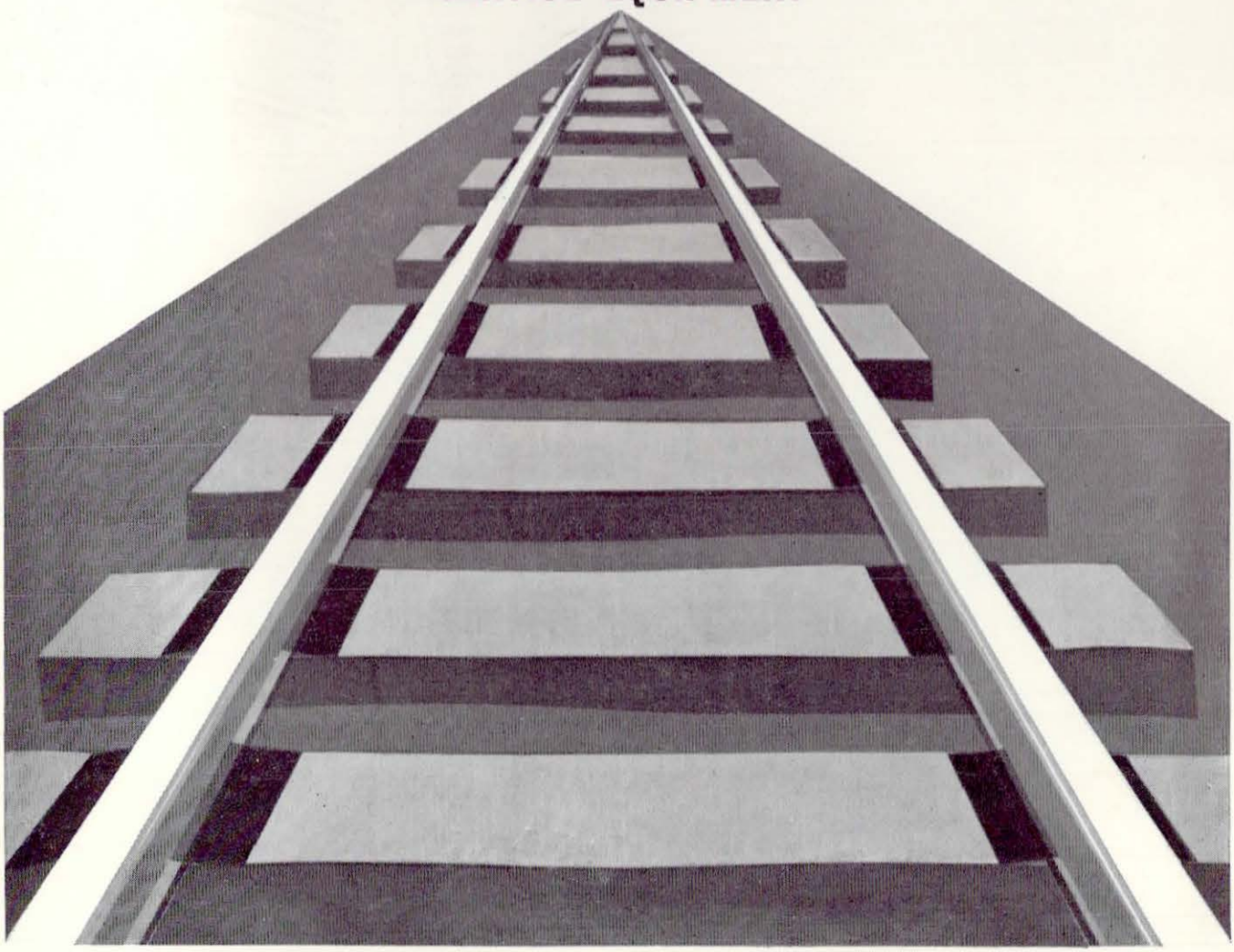

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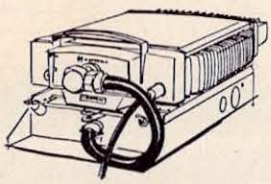

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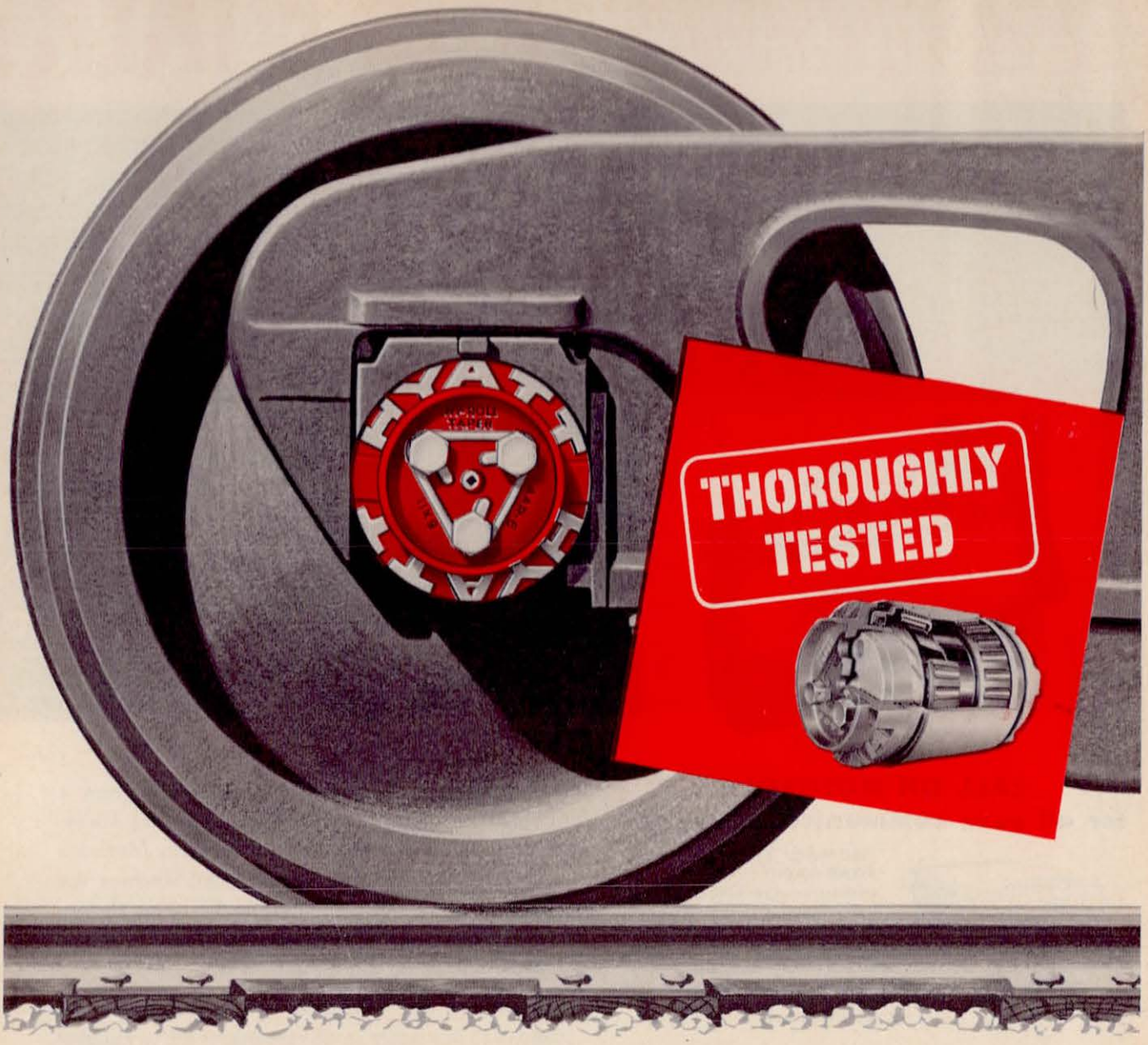

HYATT'S taper freight bearing

Today's non-stop freight schedules call for maximum speeds, uninterrupted by hotbox delays. And Hyatt's taper freight bearing offers rugged, trouble-free service on the fastest schedules.

This means you can roll up greater profits, because Hyatt's taper freight bearings can pay for themselves in operating economy. They help eliminate delays, reduce damage claims, increase car availability, improve service and promote greater good will with your shippers.

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When the majority of all freight cars roll on anti-friction bearings, our railroads can make the most of their earning potential. So, make a move for the future and future profits. Specify Hyatt taper freight bearings for all your new car orders.

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FOR NON-STOP FREIGHT

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RAILWAY AGE *weekly* November 14, 1960 • Vol. 149, No. 20

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WP favors Santa Fe control ..... p. 9

Formally endorsing the ATSF position, as opposed to SP's bid, WP directors say an association with the Santa Fe would best serve the interests of shareholders, employees and the public.

ICC revamping recommended p.10

Changes recommended by two study groups—one sponsored by the Bureau of the Budget, the other by the Commission itself—would expedite and simplify ICC procedures.

Hotbox detector report: 87% efficient p.18

The detector, first one installed on the Erie-Lackawanna, is about 65 miles east of Buffalo, N.Y. It and its associated alarm equipment is made by General Electric. The detector can check journals on cars moving 6 to 60 mph.

New N&W hoppers to cut costs p.23

The road's Roanoke shop is turning out the first 85-ton hopper cars built in the U.S. The car is an elongated version of the 70-ton car adopted as an AAR alternate standard.

What's happening to crossties? p.31

Most track maintenance officers responding to a recent questionnaire said their general tie condition hasn't deteriorated in the last 10 years.

New York awaits first 'crewless' train p.40

The train will begin revenue service in about 5½ to 6 months, says the chairman of the New York City Transit Authority. But, officers of the Transport Workers Union have said the TWU "will fight the destruction of mass transportation in NYC as a result of unbridled automation."

Needed: 'Total transport' research p.44

A just-published report emanating from a conference of leading transportation men suggests the creation of a research program in which government and all modes of transport would participate. Such a program would "lead to the improvement of the composite transport function."

The Action Page—Dear Mr. Kennedy p.50

Government, by acting as a kind of one-eyed arbiter on transportation issues, has helped nudge the railroads into

Leading Railroad Standardizes on Aeroquip Fueling Unit

FULLY AUTOMATIC REFUELING ELIMINATES WASTE . . . CUTS COSTS

Now, the Pennsylvania Railroad, operating more than 2400 diesel locomotives, is among the major roads standardizing on the Aeroquip Automatic Fueling Unit. Evaluation tests prove the many cost-cutting, time-saving benefits to be gained by standardization.

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The Aeroquip Fueling Unit can be installed on any diesel locomotive in less than two hours. Maintenance by railroad personnel is simple.

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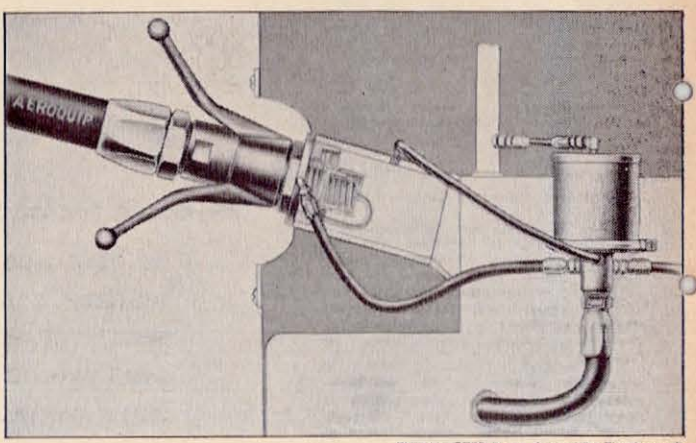

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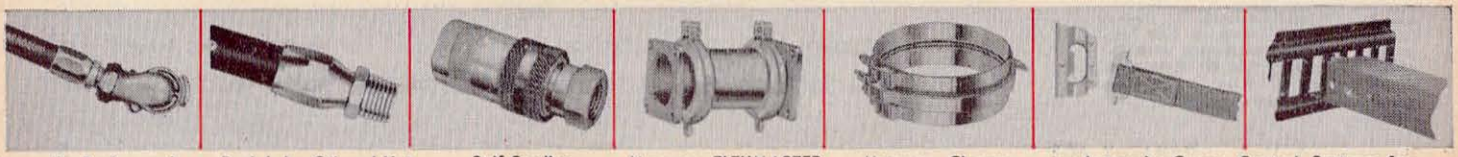

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Aeroquip Cargo Control Systems for Case Goods and for General Cargo

Week at a Glance CONT

Current Statistics

Operating revenues		
9 mos.,	1960 ...	$7,210,476,221
9 mos.,	1959 ...	7,390,378,920
Operating expenses		
9 mos.,	1960 ...	5,723,495,009
9 mos.,	1959 ...	5,807,048,048
Taxes		
9 mos.,	1960 ...	781,301,223
9 mos.,	1959 ...	792,949,896
Net railway operating income		
9 mos.	1960 ...	432,951,018
9 mos.,	1959 ...	547,919,151
Net income estimated		
9 mos.,	1960 ...	303,000,000
9 mos.,	1959 ...	393,000,000
Carloadings, revenue freight		
43 wks.,	1960 ...	25,835,855
43 wks.,	1959 ...	25,750,343
Freight cars on order		
Oct. 1,	1960 ...	21,662
Oct. 1,	1959 ...	35,626
Freight cars delivered		
9 mos.,	1960 ...	43,684
9 mos.,	1959 ...	29,916

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their present precarious situation. The new Administration can show its mettle by taking immediate steps to insure the strong, well-rounded transport network that is vital to the American economy.

Short and Significant

A $6 million bond issue for passenger improvements . . .

was approved by Philadelphia voters last week. Money will be added to $2.7 million approved by City Council for this purpose. It will be used to provide new rail equipment (including some cars on all six of the lines under the city's passenger-improvement program), rehabilitation of other equipment, electrification of the Reading's Fox Chase Line, and new turnaround facilities on the PRR main line at Torresdale.

Decline of $90 million in net income . . .

of Class I railroads is estimated by the AAR for this year's first nine months. The estimate puts the nine-months net at $303 million, compared with $393 million last year. September's estimated net, at $25 million, was off $4 million from September 1959's $29 million. Thirty-one Class I roads failed to earn their fixed charges in this year's first nine months. Rate of return for the 12 months ended with September was 2.31%.

Strike ballot of 110,000 Canadian non-op . . .

railway employees is expected to be strongly in favor of a strike notice when results are announced this week. At issue: a 14-cent increase recommended by a conciliation board but rejected by the railroads, which are under a freight-rate freeze imposed by the government and say they cannot meet the $34 million annual cost of the wage increases. Strike ballots closed Nov. 8, but results have been withheld until general conference chairmen of the 15 unions involved have met. Assuming that the ballots favor a strike, a nationwide walkout of Canadian non-ops early in December is considered likely unless one of the two things happens: settlement by the railways followed by a request for a rate increase, or settlement by Act of Parliament, followed by a federal subsidy to meet the cost.

Railway Systems and Management Association . . .

was chosen as the new name for the Railway Systems and Procedures Association. The change, effective Nov. 1, was favored by a membership vote since RSMA "more accurately describes" the association's activities in exploring "management problems at all levels and in all departments."

Vol. 3, No. 2

Railway Executive News

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111 New South Road • Hicksville, Long Island, New York

"L & N LOOKS AHEAD at Railroad Communications and Signaling"

Timely article† by Supt. of Communications and Signals, P. P. Ash of the Louisville and Nashville Railroad, describes the L&N's integration of latest advances to meet present-day requirements of railroad signaling and communications. Author Ash details a long, impressive series of L&N advances.

"One of the most serious problems the railroads have to contend with," writes Ash, "and one in which the answer appears to lie in the field of electronics, is the problem of freight car hot boxes. Numerous wrecks and derailments caused by burned-off journals have resulted in millions of dollars loss both in damage to equipment and lading.

"On the L&N, to accomplish the desired results we use electronic equipment consisting principally of a sensitive instrument to detect infrared heat rays. Developed by the Servo Corporation of America, this delicate instrument reacts to the infrared rays radiated from the journal boxes as they pass the device."

The Louisville and Nashville Railroad is one of twenty-eight Class I American railroads using SERVOSAFE® Hot Box Detective* systems to guard against derailments, damage, and delays. More than 200 SERVOSAFE Hot Box Detective systems are in successful operation across the country to date. ■

†*L&N Looks Ahead at Railroad Communications and Signaling*, by Philip P. Ash, Supt., Communications and Signals, Louisville and Nashville Railroad – RAILWAY MATERIALS and EQUIPMENT, July-August, 1960.

*Protected by U.S. & Foreign Patents, including U.S. Patents No. 2,880,309 and No. 2,947,857. Other U.S. & Foreign Patents Applied For.

Operator watching SERVOGRAPH® hot box detector recorder at L&N's big Boyles Yard, Birmingham, Alabama. L&N has a number of SERVOSAFE® Hot Box Detective® systems in operation at various locations.

C&EI Makes 28th Road To Go SERVOSAFE®

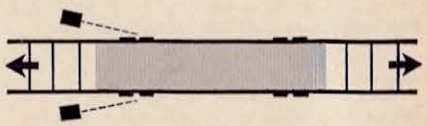
Main Line Scanners Are Bi-Directional

Twenty-eighth railroad to join the fold of SERVOSAFE® Hot Box Detective® users, the Chicago & Eastern Illinois has ordered five basic systems to guard C&EI rights of way.

Already in successful operation, two of the systems installed on the main line at Glover, Ill., and Cayuga, Ind., employ a single set of bi-directional infrared trackside scanners. Here in this single-track area the same pair of scanners inspects the journal boxes of trains going in either direction.

The scanners are installed in the conventional manner just outside the rail, their sensitive infrared eyes focused to view the trailing side of the journal boxes passing in one direction. Trains passing in the opposite direction switch transducer sequence so that the scanners look at the leading side of the boxes.

Bi-directional scanner operation is optional with the basic SERVOSAFE system or any of the five other SERVOSAFE expanded system groupings. ■



Coming or going, trains have journal boxes inspected by same pair of bi-directional trackside scanners.

Detective Demand, Rapid Delivery Met by Modern Production Methods

Skilled Servo electronic technicians man their stations as SERVOSAFE Hot Box Detective systems highball through production. Full-scale production keeps pace with Detective demand and assures immediate delivery.—■—Engineering, production, testing, quality control, inspection, and shipping all work as a team under one roof in Servo's spacious modern 134,000 square-foot Hicksville, Long Island, plant. Electronics specialists to the railroads, they are "serving safety through science." ■

Resembling batteries of mortars, long lines of infrared bolometers for SERVOSAFE trackside scanner units receive thorough inspection and testing before they are assembled inside their protective housings.

Skilled Servo electronic technicians check out modular components of rest of SERVOSAFE Hot Box Detective system – data processing unit, recorder, carrier, hot box locator, etc. – before and after final assembly of the equipment.

WP Favors Santa Fe Control

► **The Story at a Glance: Western Pacific directors have authorized management to support Santa Fe and oppose Southern Pacific in the rapidly-developing fight for control of small but prosperous WP.**

WP's action brought into focus an apparent difference of opinion between ATSF and SP on competition and the public interest. Santa Fe President E. S. Marsh said the big question "is whether all pretense of preserving existing competition between railroads is to be abandoned. We believe the American system should place continuation of reasonable competition ahead of austere economy which is not of first importance as a matter of public interest in the area involved." SP President D. J. Russell, however, maintained that "the public interest can best be served by a coordinated system of rail facilities which recognizes that the railroads' chief sources of competition are no longer the railroads themselves, but other modes of transportation."

As anticipated, Western Pacific is lining up solidly in support of Santa Fe's bid to acquire control of the road. Action by WP's board of directors Nov. 7 reaffirmed the company's opposition to SP's control proposal—and it firmed up an endorsement for the ATSF offer.

Directors noted these reasons for favoring the Santa Fe application:

- Santa Fe's exchange offer of 1¼ shares of its stock for each share of WP "is fair and reasonable from the Western Pacific shareholders' viewpoint, both as to the value of shares and also [the] increased dividend that would be received."
- ATSF control would assure continuation of efficient, competitive rail service—both east-west in the territory now served by WP and north-south via Santa Fe-Western Pacific-Great Northern. It would also provide "stronger, more dynamic and more competitive service in the West, particularly in the San Francisco Bay area, the Santa Clara valley and the Sacramento valley."
- Such control would "permit substantial economies that could be achieved through joint action of Santa Fe and WP, while additionally maintain[ing] the opportunity for economies between the Western Pacific and the Southern Pacific."
- It would also assure, "in the opinion of the board, that the interests of the Western Pacific employees will be adequately and properly protected."

Directors authorized WP management to proceed "to intervene with ICC in support of the Santa Fe proposal and to take all steps necessary to work with the Santa Fe in seeking formal approval of its application by the Commission." Management is also authorized "to intervene before the Commission to oppose the Southern Pacific's application."

Santa Fe President Marsh, stressing the competitive angle, said his road welcomes the WP endorsement. He added: "Only through a cooperative effort of Santa Fe and Western Pacific in interchange of traffic, common interest in the Beiber Route and equal ownership in such as Oakland Terminal Railway and Alameda Belt Line has effective competition been produced in an area that, by reason of its great business activity and potential growth, is entitled to the benefit of the competitive rail service that the Santa Fe proposal is designed to insure."

SP President Russell put his emphasis on efficiency and economy. Shippers and the public, he said, "cannot afford to have less than the most efficient railroad transportation service at the lowest possible cost. SP and WP are in a unique position to increase efficiency and reduce costs through coordination. No other combination of railroads provides the same opportunities in this territory. Experience has proved that control is essential to insure this coordination on a continuing and enduring basis." Under SP control, he added, WP would continue as a separate operating company, would maintain all interchange points, gateways, routes and traffic arrangements. Only through SP control and the resulting coordination of services, Mr. Russell concluded, "can the shippers and receivers of freight, travelers by rail and the general public in this area be assured of the benefits that are bound to grow out of a vigorous and financially strong railroad system."

North Dakota Derails 'Surplus Brakeman'

North Dakota's "surplus brakeman" law was wiped off the books last week as the voters gave overwhelming approval to an amendment permitting the railroads to operate trains with five crewmen instead of six. The legislature had approved the change last year (RA, March 23, 1959, p. 7), but the unions later forced a referendum on the issue.

Both the railroads and the unions waged vigorous campaigns—with the brotherhoods laying stress on the safety angle and the carriers contending that the extra brakeman was costing everyone money and performing no useful function. "Union talk that third brakemen are needed for safety," the railroads charged, "is a smokescreen to protect collection of dues—nothing else."

The state's crew law, dating from 1919, has required employment of six men on certain freight trains of more than 40 cars. At present, 99 men are employed as third brakemen. Employment of the extra man, the carriers charged, "wastes $1,000,000 each year."

Under provisions of the amendment, no third brakeman will lose his job so long as he wants to keep it. Railroads can begin operating with five-man crews but the number of third brakemen employed will decline gradually, through attrition.

ICC Revamping Recommended

Prescriptions for what they found to be ICC infirmities were made last week by two diagnosticians.

The diagnosticians are Booz, Allen & Hamilton, management consultants, who made a study for the Bureau of the Budget with the argeement of the Commission, and the Commission's own Special Advisory Committee on Interstate Commerce Commission Practices and Procedures.

The latter, headed by Sam H. Flint, general traffic manager of Quaker Oats Co., was created by the Commission a year ago. It consists of 18 members, including members of the Association of Interstate Commerce Commission Practitioners, the Motor Carrier Lawyers' Association, and is described in the report as "representative of all modes of surface transportation as well as of industrial traffic management."

Generally, the reports are not critical of the Commission's regulatory policies or decisions. They give much praise. They do recommend, however, many procedural and organization changes, designed principally to expedite and simplify procedures, improve the efficiency of the Commission's internal administration, and distribute the work load in a way which will afford commissioners more time to deal with major cases.

To those ends, the Booz, Allen & Hamilton report makes several recommendations and suggestions for procedures alternative to those now followed. The Advisory Committee makes 20 recommendations, different in detail from the BA&H proposals but nevertheless along similar lines.

Organization changes recommended by BA&H propose, first, that the present concept of the Commission's chairman be modified and his role be "markedly strengthened." The report goes on to say that the present practice of rotating the chairmanship annually among the Commission's 11 members

(Continued on page 45)

Watching Washington *with Walter Taft*

• **POLITICAL CLIMATE** for railroads will not change much at the national level as a result of last week's election. Like its predecessor, the new Congress will be under Democratic control, and Interstate Commerce committees of the Senate and House will have much the same memberships and the same chairmen—Senator Magnuson of Washington and Representative Harris of Arkansas.

THE DEMOCRATIC PLATFORM has a transportation plank which says the railroads "are in particular need of freedom from regulation to enable them to compete effectively with other forms of transportation." But Senator Magnuson says this doesn't bind Democratic members of his committee, which will have jurisdiction over transport legislation proposed in the Senate.

PRINCIPAL transport project before the committee is the study of legislative proposals not in the 1958 Transportation Act. They include the railroad industry's diversification proposal, which calls for removal of restrictions on ownership of one form of transport by another; the need for regulation under present conditions; federal policy on mergers; and the kind and amount of rail passenger service needed to serve the public interest and national defense.

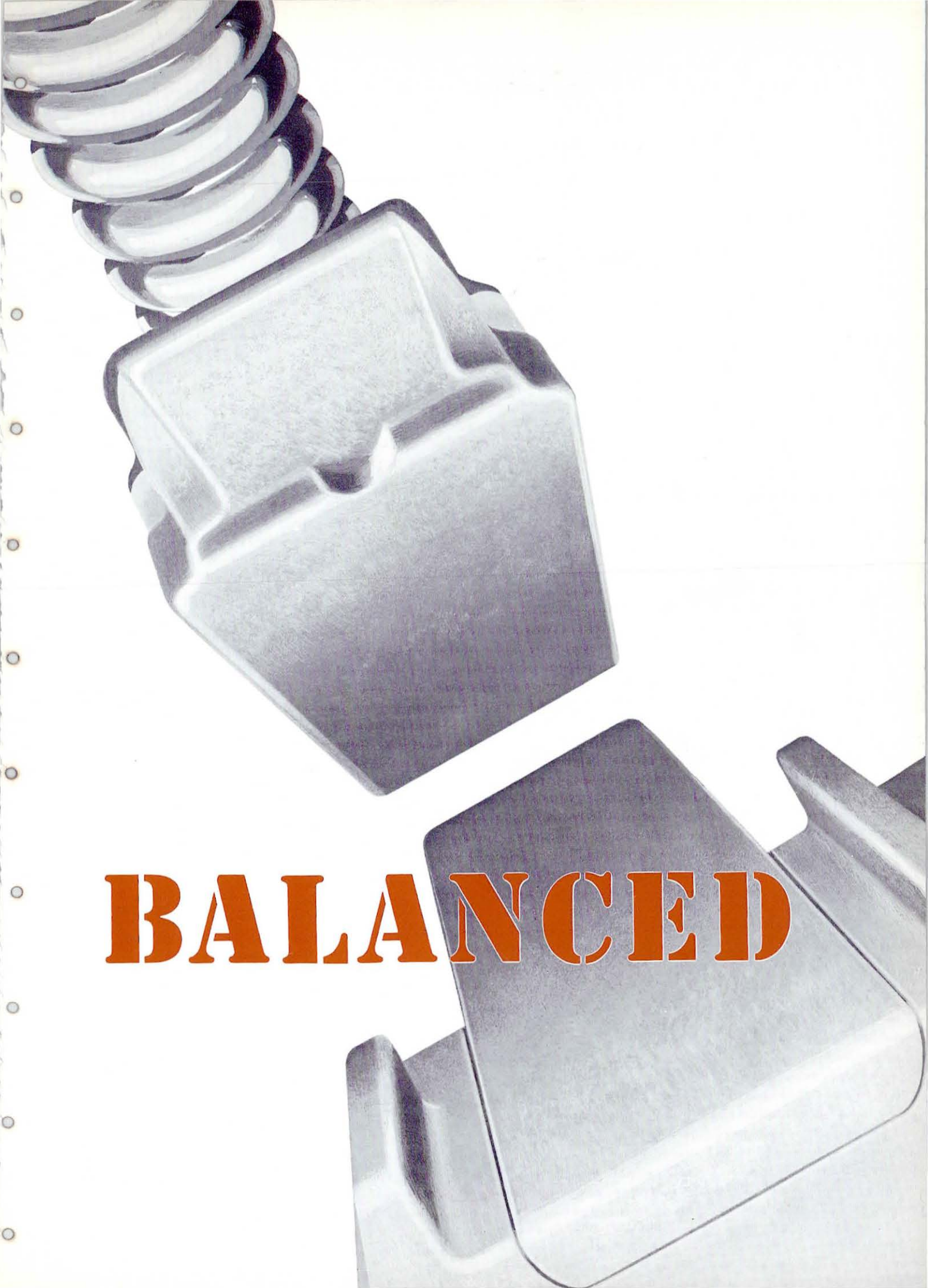
THE STUDY DIRECTOR, Maj. Gen. John P. Doyle, retired, has told Railway Age that he expects to submit his reports to Committee Chairman Magnuson "during Christmas week." They will thus be ready for consideration by the committee when the new Congress convenes.

PRESIDENT-ELECT KENNEDY issued a railroad-policy statement during his campaign. It had general comment on the plight of the industry, but its only specific proposals called for a census of transportation, government aid for railroad commutation services, and liberalization of benefit provisions of the Railroad Retirement and Railroad Unemployment Insurance Acts.

ONE LEGISLATIVE PROPOSAL on railroad management's priority list seems to be favored by Mr. Kennedy. That's the call for tax relief to permit more realistic depreciation and amortization arrangements. To keep American industry competitive with the "new and modern industrial plant" of Europe and the Soviet Union, the President-elect makes this proposal: "Wherever we can be certain that tax revision, including accelerated depreciation, will encourage the modernization of our capital plant—and not be a disguise for tax avoidance—we should proceed with such revision."

ADVERSE LEGISLATION from management's point of view could come if railroad labor unions convince Mr. Kennedy to get behind their "make work" proposals and their drive to repeal the service-abandonment (so-called train-off) provisions of the 1958 act. The latter is a top priority item on the legislative program of the Railway Labor Executives' Association, most members of which are Kennedy supporters.

THE PRESIDENT-ELECT opposes compulsory arbitration of labor disputes, a course still favored by the AAR for settling major railroad cases. Meanwhile, Mr. Kennedy does favor broad presidential powers for settling controversies when strikes might bring national emergencies. The President, as Mr. Kennedy has put it, "should be given the freest choice of all possible measures," including "mediation, fact-finding with and without public recommendations, temporary government operations, retroactive pay orders, and the right not to interfere at all."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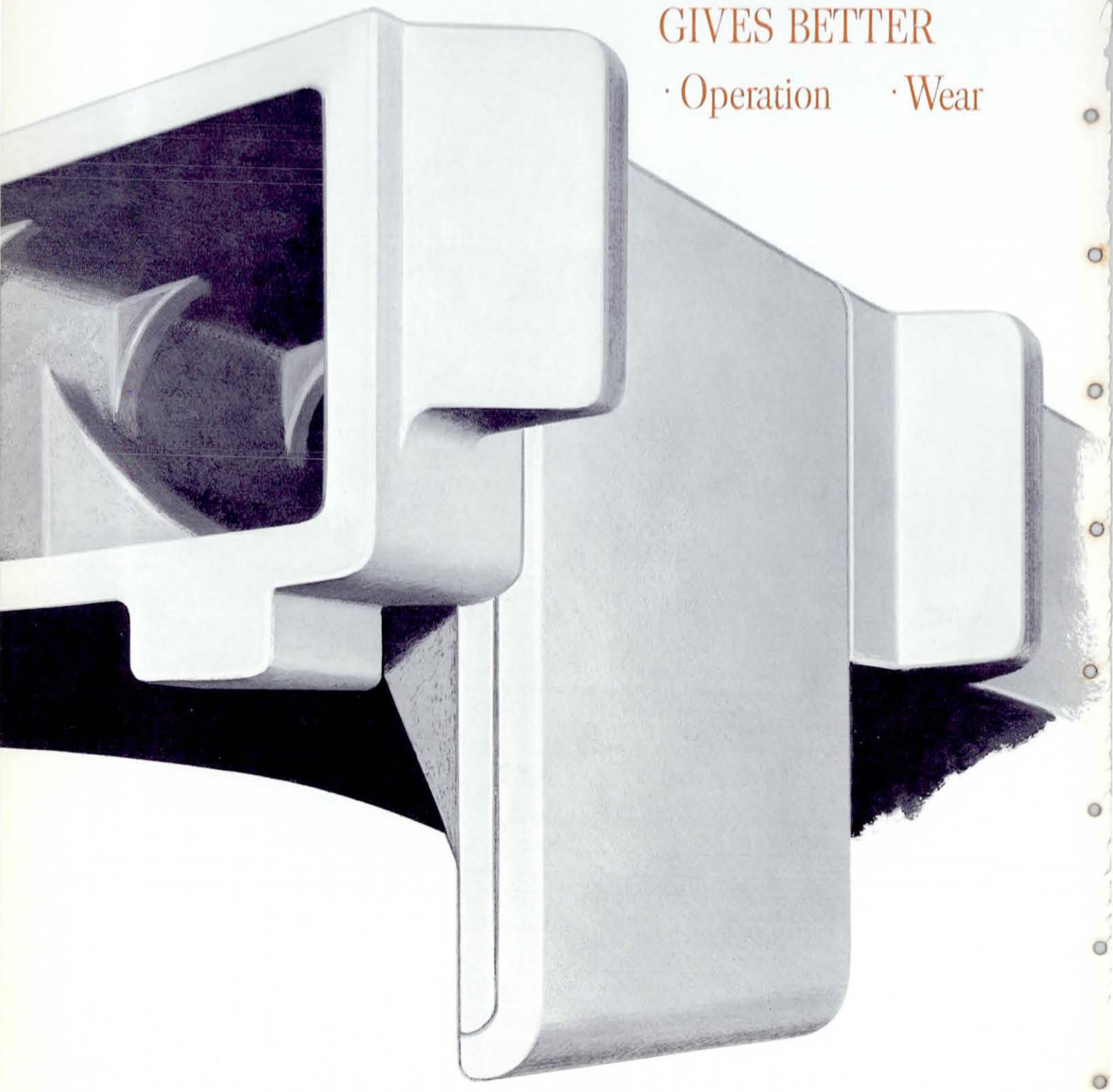
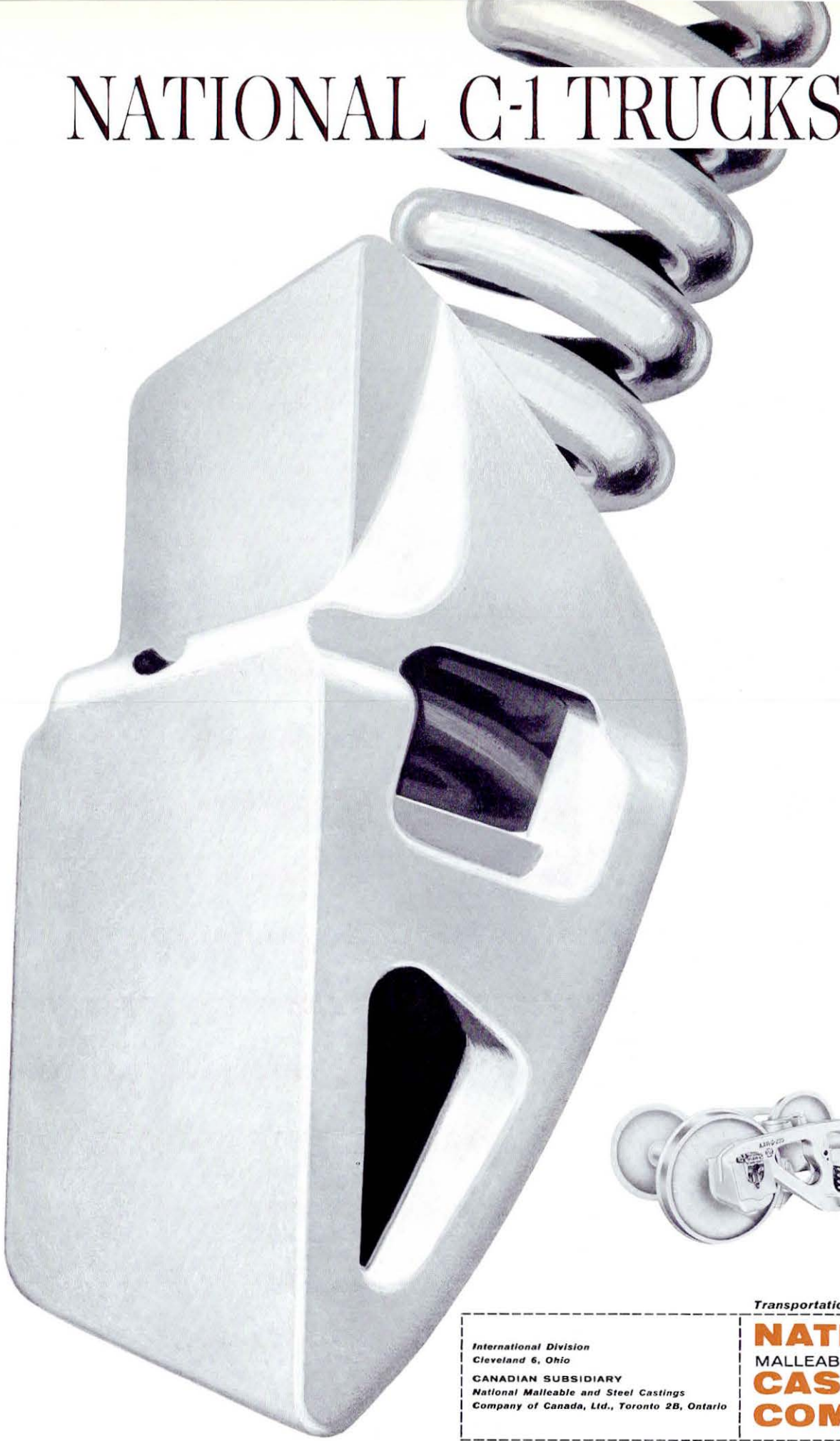


NATIONAL C-1 TRUCKS



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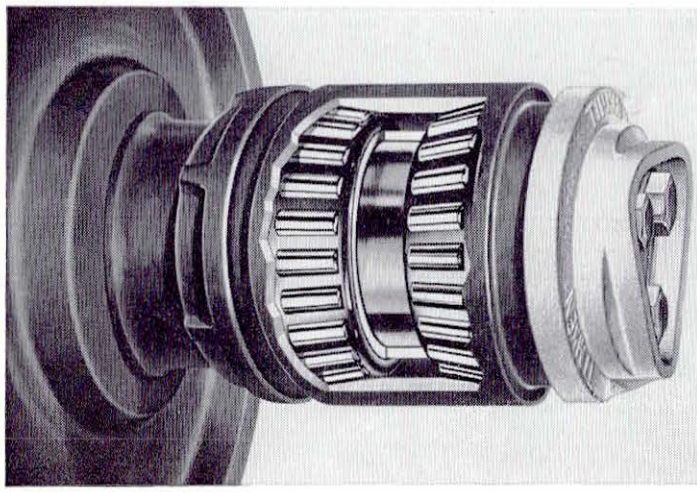
TO EARN MORE MONEY PER CAR

Railroads are realizing immediate benefits from their investment in "Roller Freight". With cars on Timken® Heavy Duty "AP" bearings, they can roll record mileage—without fear of hot boxes. Timken bearing-equipped cars are rolling up to 168,000 miles per year in high speed service.

And Timken bearings cut lubricant costs. They'll roll four years without adding lubricant. In terminals, they require only visual inspection, get back to producing revenue sooner.

Railroads are pushing towards the big day when all freight is "Roller Freight". The day when they will save an estimated $144 per car annually in operating and maintenance costs. 98 of these railroads have already started the "Big Switch". They have over 68,000 Timken bearing-equipped freight cars in service or on order—ordered 16,000 car-sets of Timken "AP" bearings so far this year.

Timken "AP" bearings are available for all sizes of standard axles and Class G 7 x 14. And now is the time to switch to Timken tapered roller bearings—"Roller Freight" at its best! The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO".



heavy duty
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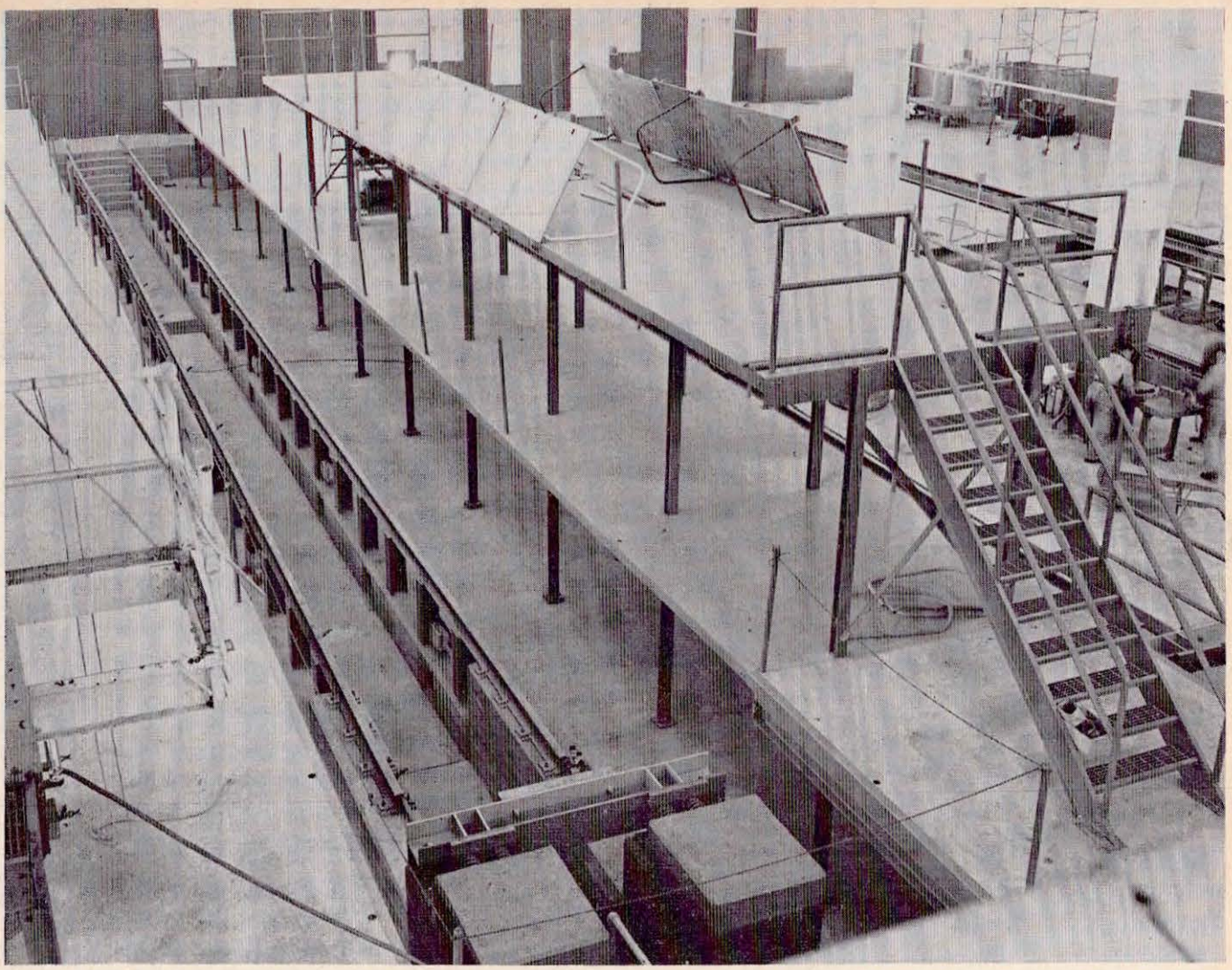

FOUR-LEVEL shop includes top level with hinged platforms to simplify top deck servicing. Annual inspections are done in this area. Lubricating oil, car oil, and treated water are available at regular intervals along these tracks.

GTW Updates Big Enginehouse

► **The Story at a Glance: Initial experience with a newly equipped enginehouse at Battle Creek, Mich., indicates the Grand Trunk Western has invested wisely.**

The GTW, embarked on a major modernization program in the Battle Creek shops, spent $350,000 to install the 7-track enginehouse. The new facility replaces the boiler and tender shop at the west end of the old steam back shop.

Based on the first three months of operation, the road reports productio up 25%. The improvement is attributed largely to built-in convenience and modern tools.

When the Grand Trunk Western decided to invest $1.5 million to modernize shop facilities at Battle Creek it

SEVEN-TRACK diesel shop was built in west end of Battle Creek back shop during past two years.

decided to install a modern enginehouse as the first step. This job was completed last spring, and the road has now had several months' experience with the new setup. First results have been favorable.

In addition to the new enginehouse, the first phase of the modernization program included the installation of outside facilities. These, too, are in service, and provide an integrated central servicing point for all locomotives on the GTW's Chicago division.

Meanwhile, the road is going ahead with plans to adapt the main steam back shop to diesel repairs—a job to be completed next summer. This facility will contain a new wheel shop, truck and electrical repair sections and an engine stripping and rebuilding area. Minor facilities will include a battery room, filter cleaning area, small machine shop and paint spray area.

The road's decision to modernize at Battle Creek stemmed from several considerations: the shops are in the center of GTW territory, adequate manpower is available, and the city is a crew change point.

The new enginehouse is set up like this:

- Tracks 1 and 2 at floor level have a single unit center release drop pit for handling emergency wheel change-outs and traction motors.
- Tracks 3 and 4 hold two units each, and are assigned annual tests and all necessary work on engines without removing them from the locomotives. Water pumps, compressors, complete sets of piston and liner assemblies are removed here.
- Tracks 5, 6 and 7 are assigned to running repairs and monthly, quarterly and semiannual inspections. Seventeen manhours per unit are assigned these tracks for monthly inspections. Each track holds three units, and all of them, as well as tracks 3 and 4, are equipped with the conventional arrangement of elevated and depressed platforms and track pits. An additional platform at tracks 3 and 4 is equipped with hinged plywood extensions for top deck servicing.

Car oil for suspension bearings is piped along the inside of the tracks, with fittings at intervals for removable hose. The heated oil is pumped into the lines under pressure and thermostatically controlled to 120-125 deg. F. Lube oil dispensing stations for each unit are on the upper deck at tracks 5, 6 and 7. An additional station is between tracks 3 and 4. The oil is metered for the exact quantity delivered to the diesel unit, and circulates constantly from storage tanks near the pump house.

City water is processed through a small zeolite plant in the engine house for diesel steam generators and cooling systems. Water lines under the top deck are equipped with hose connections for each unit. An underground 10,000-gallon tank car tank, south of the engine house is equipped with a float valve and provides a reservoir from which the treated water is pumped by an Ingersoll-Rand close-coupled 260 gal/min self-priming pump. The Dearborn model DSS-124, SR-10 zeolite plant has a 17,000 gal/day capacity.

All tracks in the engine house are served by overhead cranes. The cranes over tracks 1 to 4 are pendant-operated from the floor.

The present 15-ton crane over tracks 5, 6 and 7 may be converted to pendant operation. A 13-ton Morgan crane between tracks 4 and 5 is available for the north working area.

A building addition at the south end of the enginehouse has a locker room, dining area, toilets and showers and offices for supervisory personnel. All offices are air-conditioned.

The new fire-proof roof, replacing the old roof with skylights, is three-layer construction. It consists of a 1½-in. double-rib steel deck, plus 1-in. rigid insulation, and a 20-year built-up steel cover on top. Electric roller doors are installed at the seven track entrances, two at entrances in the firewall between the back shop and enginehouse.

Overhead lights are GE cool white, 200-watt power-groove fluorescent lamps having an initial lumen of 13,000 and installed in Day-Brite fixtures. No starters are used and no replacements have been made to date. The Benjamin 150-watt incandescent pit lamps are equipped with Fresnal lens to throw light up underneath the pit. Benjamin angle reflector fixtures with 150-watt incandescant lamps are under the decking. Wilson Wide-Lite, 1,000-watt mercury lamps are on the roof of the running repair area and sand tower, in addition to island lighting at the fuel stations and inspection pit.

Outside facilities for servicing include fuel and water stations, inspection pit, 20-ton sand tower and a cleaning and washing station. Poage water dispensing stations are installed. Pre-dried sand is shipped from Muskegon, Mich., and stored in two converted 40-ton hopper cars which move in shuttle service. The cars are equipped with roof hatches and plug valves in the hoppers. This method of handling sand is standard over the railroad with 12 cars equipped for the service.

Four pumps supply oil from four 6,000-gallon underground storage tanks. Two are for continuous circulation of new lube oil, one for unloading and loading new car oil and one for loading of old car oil.

Cleaning and washing of diesel units is done by controls in the chemical house. Two tanks are used for mixing detergents for unit trucks and body. Each is equipped with a 1-hp pump. A 40-hp, 300gal/min high-pressure pump provides 200-lb pressure for rinsing.

◀ **FACILITIES** for fuel and water are between two servicing tracks. GTW supplies treated water to locomotives. Grating covers drains along edge of platforms.

▲ **INSPECTION PIT** for outdoor servicing is equipped with pit lamps. Sand tower with 20-ton capacity has no drying equipment; GTW buys dried sand.

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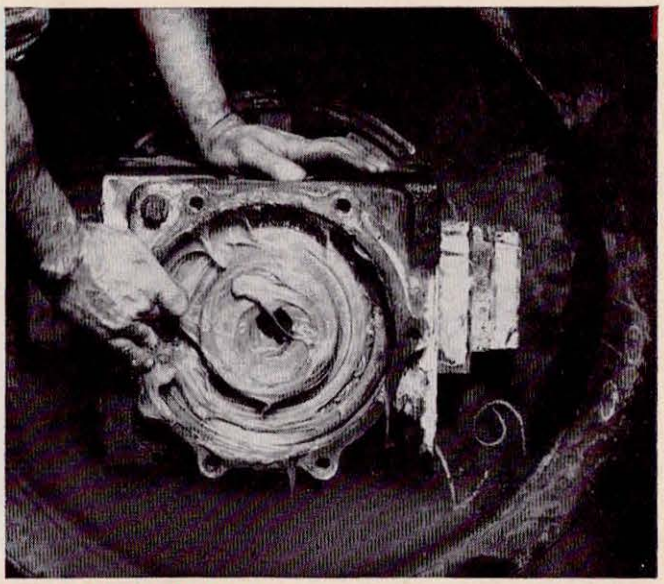
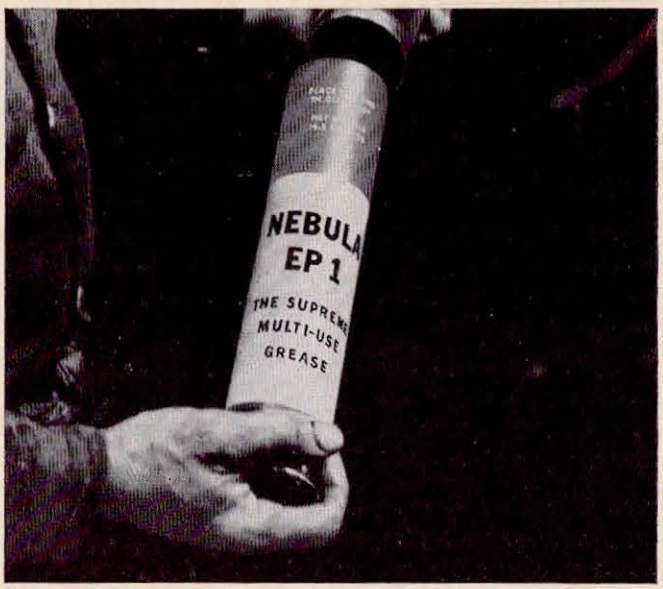
New COBLAX® in bags cuts lube time in half. Tops for traction motor gears . . . goes in bag and all. Provides measured quantities, eliminating waste and contamination.



New ARAPEN® RB 350 journal bearing grease stays put. Provides unexcelled lubrication from −30° up to 250°F. Requires less make up grease.

New ESSOLUBE® HDX crankcase oil keeps moving parts clean in small high-speed engines. Greatly reduces carbon and varnish deposits. It clings to bearing surfaces with a tough lubricating film that helps prevent wear and resists metal scoring under heaviest load conditions.



New NEBULA® EP 1 in cartridges reloads grease guns in seconds! Eliminates time consuming hand loading, keeps grease clean, assures a full charge. It outperforms many special-purpose greases under extreme loading, temperature and moisture conditions.

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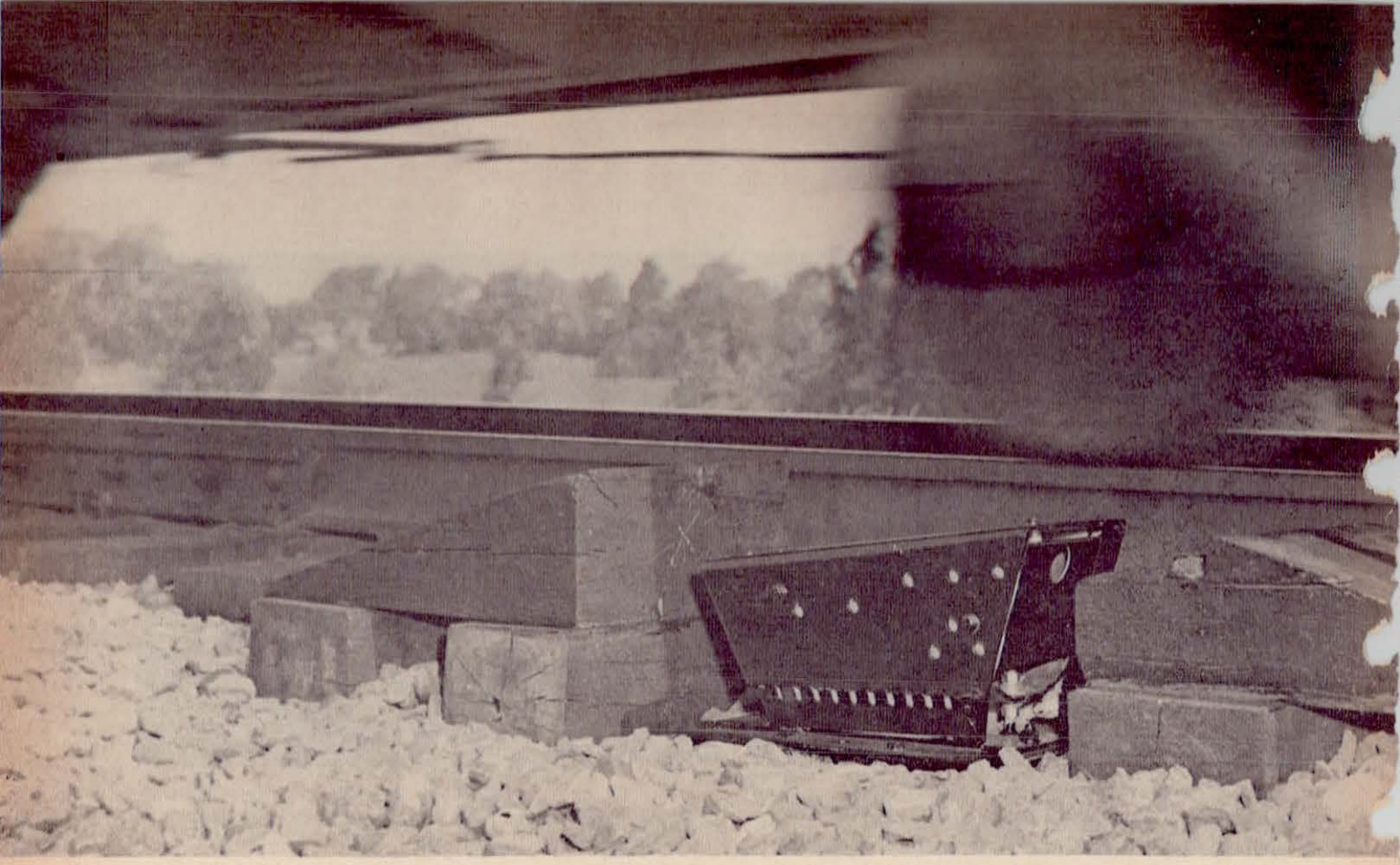


DETECTOR VIEWS JOURNAL for one ten-thousandth of a second. It can check journals on cars moving 6 to 60 mph.

Hotbox Detector Report: 87%

► **The Story at a Glance: During a one-month period, Erie-Lackawanna's hotbox detector installation at River Junction, N.Y., achieved an efficiency of 87%. Of the 15 indicated hotboxes, 13 were found to be hot and requiring attention.**

In the same 30-day period, 45 journals were indicated as being warm (incipient hotbox type). Twelve of these were set out and repaired, three were on roller bearings that were all right, and 30 received attention from car inspectors.

Erie-Lackawanna installed its first hotbox detector at River Junction, N.Y., about 65 miles east of Buffalo, to observe eastbound freight trains. The detector with its automatic alarm system, is interconnected with the signal system. The alarm system indicates to the dispatcher at Buffalo the location of hotboxes in the train. Actuation of the detector by a hotbox automatically sets signals for stopping the train.

When a train passes the detector, a hot journal will cause the alarm system to transmit the hotbox indication to the Buffalo dispatcher's office. There, a light goes on, an alarm bell sounds, and a counter begins to count axles remaining in the train. At the same time, a signal 2½ miles ahead of the train is controlled to display the Approach aspect. Another signal five miles ahead of the train displays the Stop aspect. At both signals, an indicator is lighted which displays the words "Hot Box" in white letters on a black background.

When the train stops at the second signal (Stop), a member of the crew goes to a telephone pole box and calls the dispatcher. He tells the crew member the location of the hotbox. The crew then inspects the journal, takes whatever action is necessary, and informs the dispatcher.

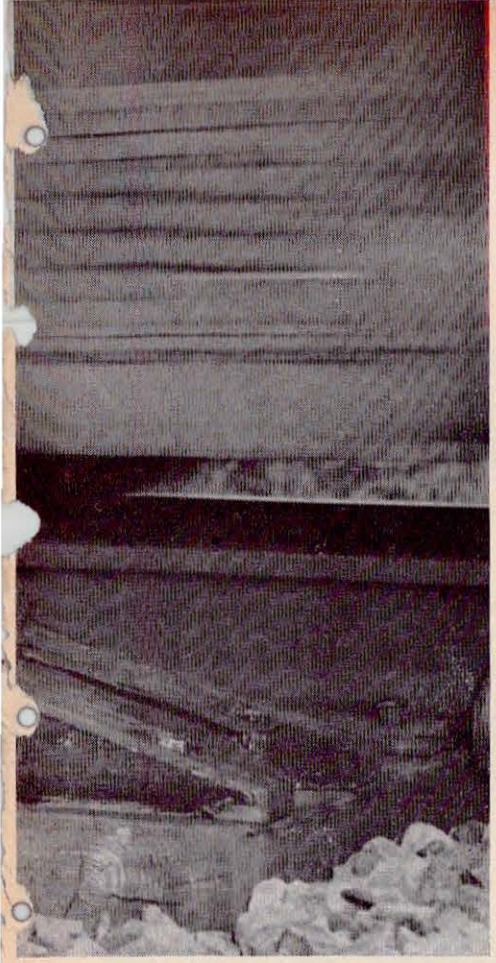
The hotbox location counters can indicate up to four hot journals on a train. The railroad has not experienced more than four hot journals on one train since August 2, when the detector was placed in service. Also at the dispatcher's office is a pengraph recorder that records on paper tape the detector readings of the journals. The dispatcher scans this tape, looking for potential hotboxes.

In a recent one-month period the dispatcher found 45 warm or potential hotboxes. He notified car inspection forces at Hornell yard, 30 miles east of the detector location. Of that number, 12 were set out and repaired before reaching Hornell, three were on roller bearings that were all right, and 30 were attended to by inspection forces.

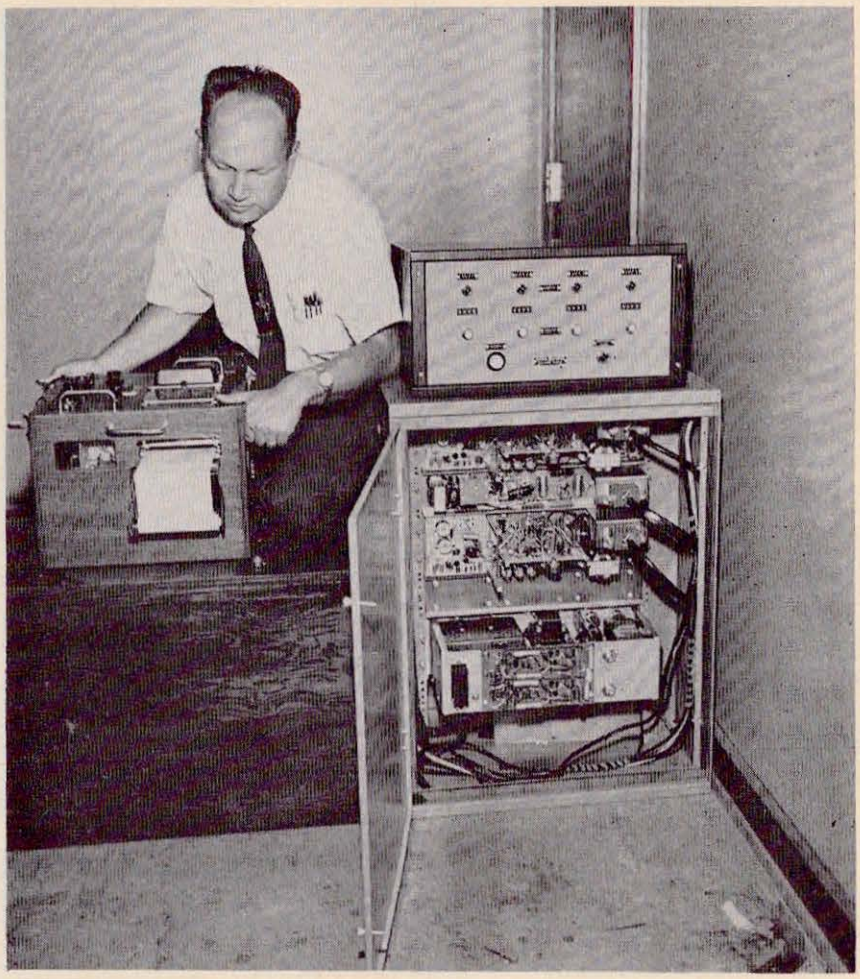
15 Hotboxes in One Month

During this same period there were 15 actuations of the alarm system indicating hotboxes. Of these, 10 were found by train crews, three not found by crews were found by Hornell car inspectors, and two are listed as unconfirmed.

The hotbox detector and its associated alarm equipment is made by General Electric Company. It is capable of observing moving journals with train speeds of 6 to 60 mph, and is operative from —40 deg F to +120 deg F. Indications are sent from the detector location at River Junction to Buffalo via carrier over an existing wire pair.



Photographs courtesy Erie-Lackawanna



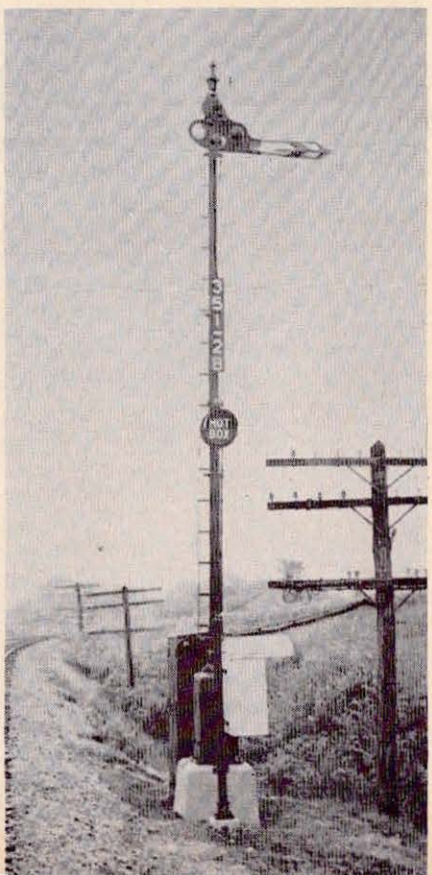
Efficient

Cost of the installation, including the equipment, was $50,000.

At the detector location is a test panel for the adjustment of the detector equipment and test jacks for checking on the operation of the carrier equipment that transmits the hotbox detector indications 65 miles to the dispatcher's office. A pengraph recorder in the relay house at the detector location is helpful to the maintainer when adjusting the equipment. For proper alinement of the detector viewing units, the maintainer uses a light source to simulate a hotbox. The light source is fitted to a wood template that attaches to the rail to place the light at the proper spatial relation with respect to the detector.

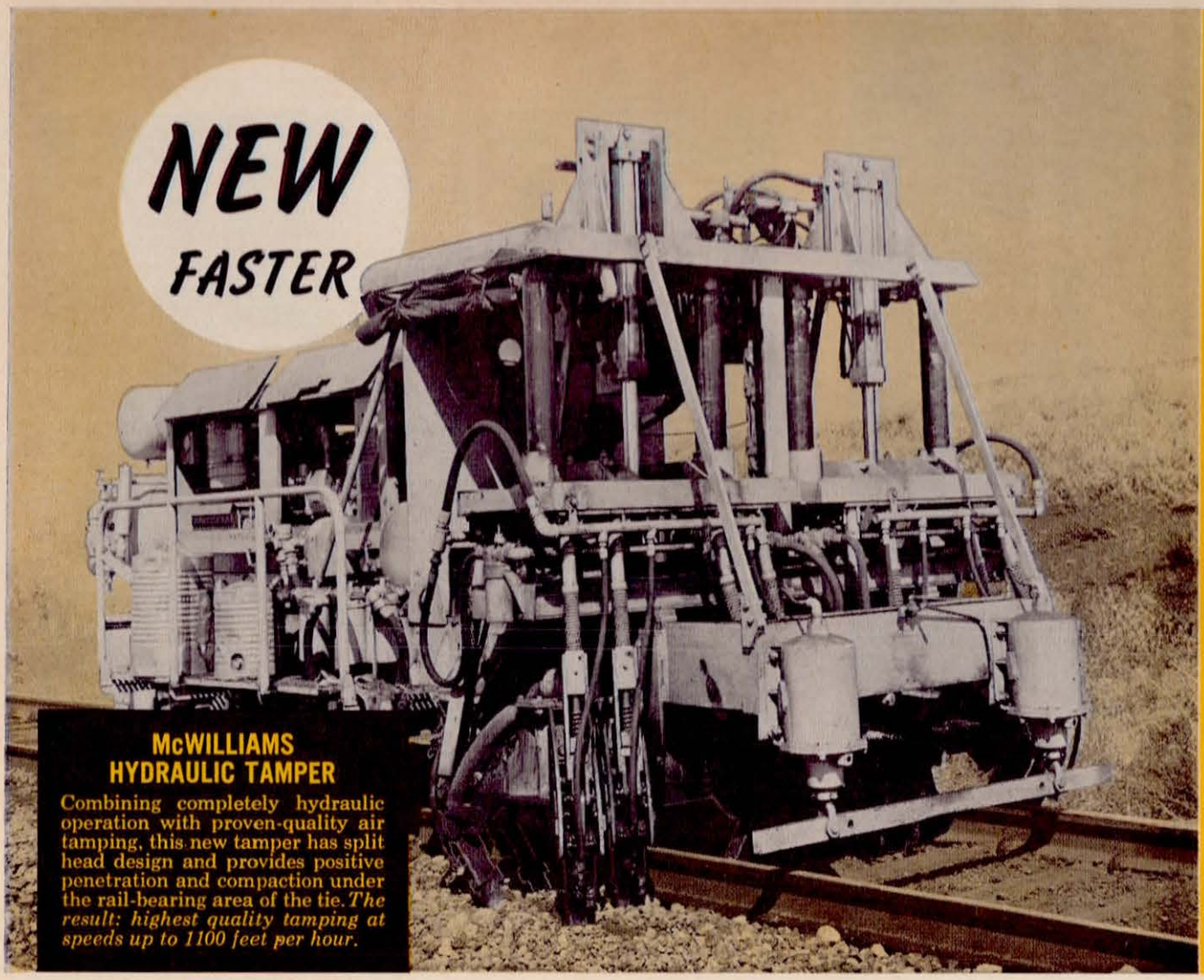
Each detector-viewing unit is mounted on a separate foundation between the ties to minimize vibration. Wood wedges are bolted to ties on each side of the detector viewer to protect it against possible dragging equipment.

The installation was made under the jurisdiction of F. Youngwerth, general superintendent communications and signals.



DISPATCHER'S OFFICE has pengraph recorder and indication alarm equipment. Top row of indication lights are for hotboxes on north side of train. Just below these lights are the counters to indicate the number of axles to the end of the train from the axle containing a hotbox. Four lights below the counters are for hotboxes on the south side of train. Only eastbound trains are checked.

AUTOMATIC SIGNAL indicates stop when a hotbox is detected. Indicator lamp on mast displays white "Hot Box" on a black background. Train crew uses white pole box phone to call dispatcher to ascertain hotbox location in train. Signal 2½ miles in approach to this signal displays Approach aspect and white "Hot Box" letters on an indication lamp.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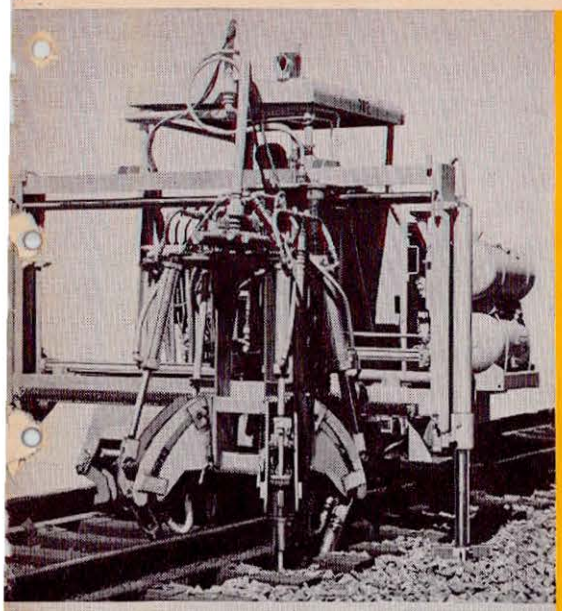
HYDRAULIC TAMPER
Combining completely hydraulic operation with proven-quality air tamping, this new tamper has split head design and provides positive penetration and compaction under the rail-bearing area of the tie. *The result: highest quality tamping at speeds up to 1100 feet per hour.*

Track stays Up Longer with

Track tamped with these units will extend the surfacing cycle by 30% or more over other machines in use—in all cases, providing the lowest tamping cost per year. *Write for new Tamper Bulletin T-600.*

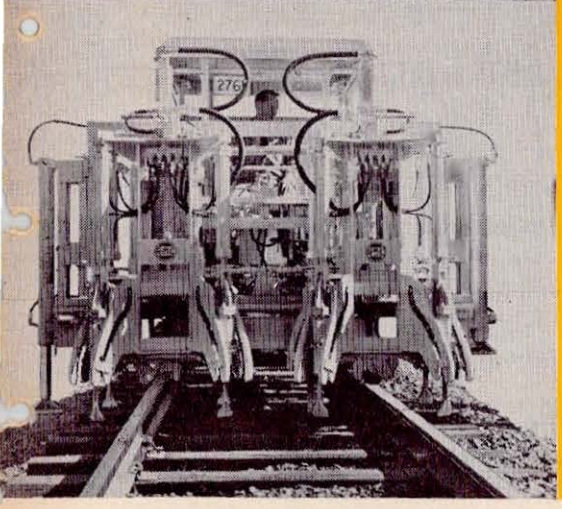
McWILLIAMS JACK TAMPER

Speed and ballast compaction are sufficient to keep ahead of multiple tamping—with no need for over-raising. Guns mounted either inboard or outboard the rails.



McWILLIAMS SPOT TAMPER

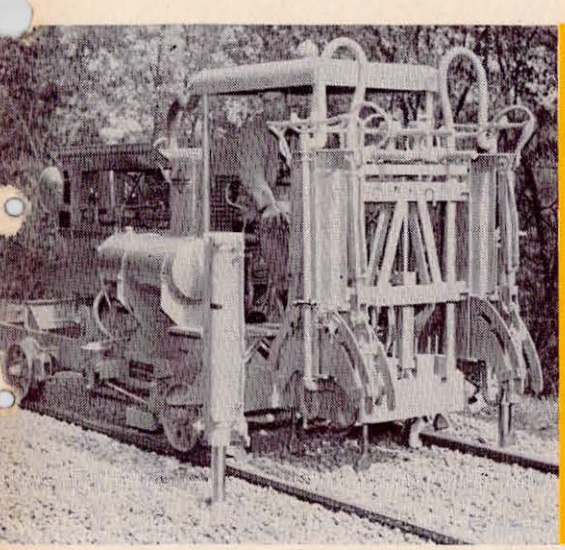
The most useful and the most widely used spot tamper, this fast, mobile machine delivers big-tamper ballast compaction.



McWILLIAMS MULTI-PURPOSE 8

The world's most versatile tamper, this intermediate machine is a production tamper . . . a spot tamper . . . a jack tamper.

a McWilliams Tamper



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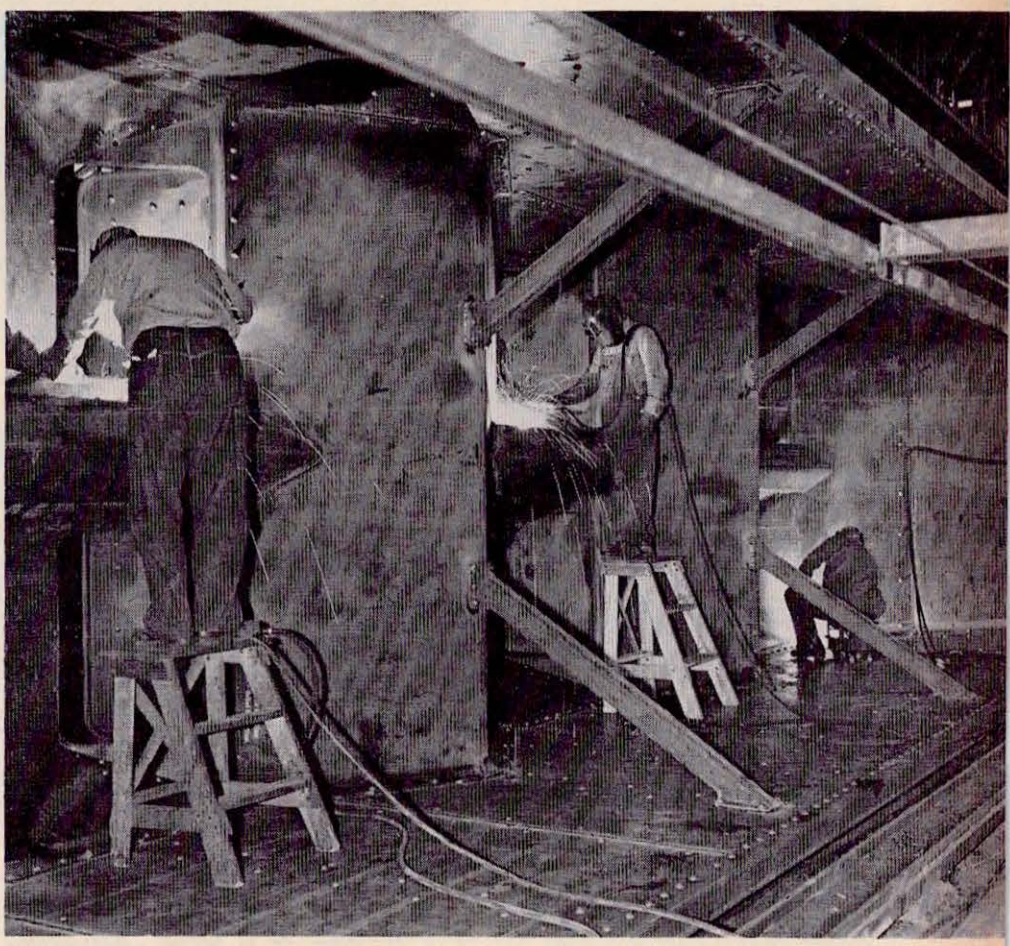
New N&W Hoppers to Cut Costs

The Norfolk & Western expects to cut operating and maintenance costs with its new 85-ton-capacity hopper cars.

The first half of a 1,000-car, $12,000,000 order placed earlier this year has been completed at the road's Roanoke, Va., shop (RA, Sept. 5, p. 12). The low-alloy-steel cars are the first 85-ton hoppers built in the U.S. They will be used for high-volume coal movements to steel mills, utilities, and to ocean and lake ports.

Most of the N&W's open-top car fleet consists of 70-ton cars. Compared with them, the 85-ton units have—per ton of capacity—lower first cost, lower light weight and shorter length. Periodic maintenance costs, such as packing and repainting, will be less. The number of units to be switched and handled will be reduced, which will cut costs. Accounting costs will be less, because of a reduction in the number of units to be dumped at ports. Air-brake problems will be diminished, because there will be fewer brake components and connections in a train.



WELDING in body of 75-ton hopper is supplemented by riveting in sides. Riveting is intended to resist damaging effects of car shakers. Car is in welding positioner.

Variation on AAR Standard

The 85-ton hopper is an elongated version of the 70-ton standardized car adopted as an Association of American Railroads alternate standard design. Plate thicknesses and structural sections in the two cars are the same. Most of the design features are duplicated. The length over strikers has been increased from 40 ft 11½ in. in the 70-ton unit to 46 ft 1½ in. in the new design. This increases the capacity from 2,928 cu ft to 3,235 cu ft, sufficient for the 85-ton rating.

The 70-ton car was the result of a cooperative development program undertaken by the N&W, Chesapeake & Ohio and Pennsylvania. All three roads are committed to building the standardized 70-ton car when units of that capacity are ordered. Only the Pennsylvania, however, has placed an order for the standardized car.

The 85-ton car is welded, except for the riveting used on side stakes, top and bottom chords, center filler castings, strikers, and safety appliances. Riveting of sides helps combat the damaging effects of car shakers. All interior joints are seal welded to prevent corrosion in the joints.

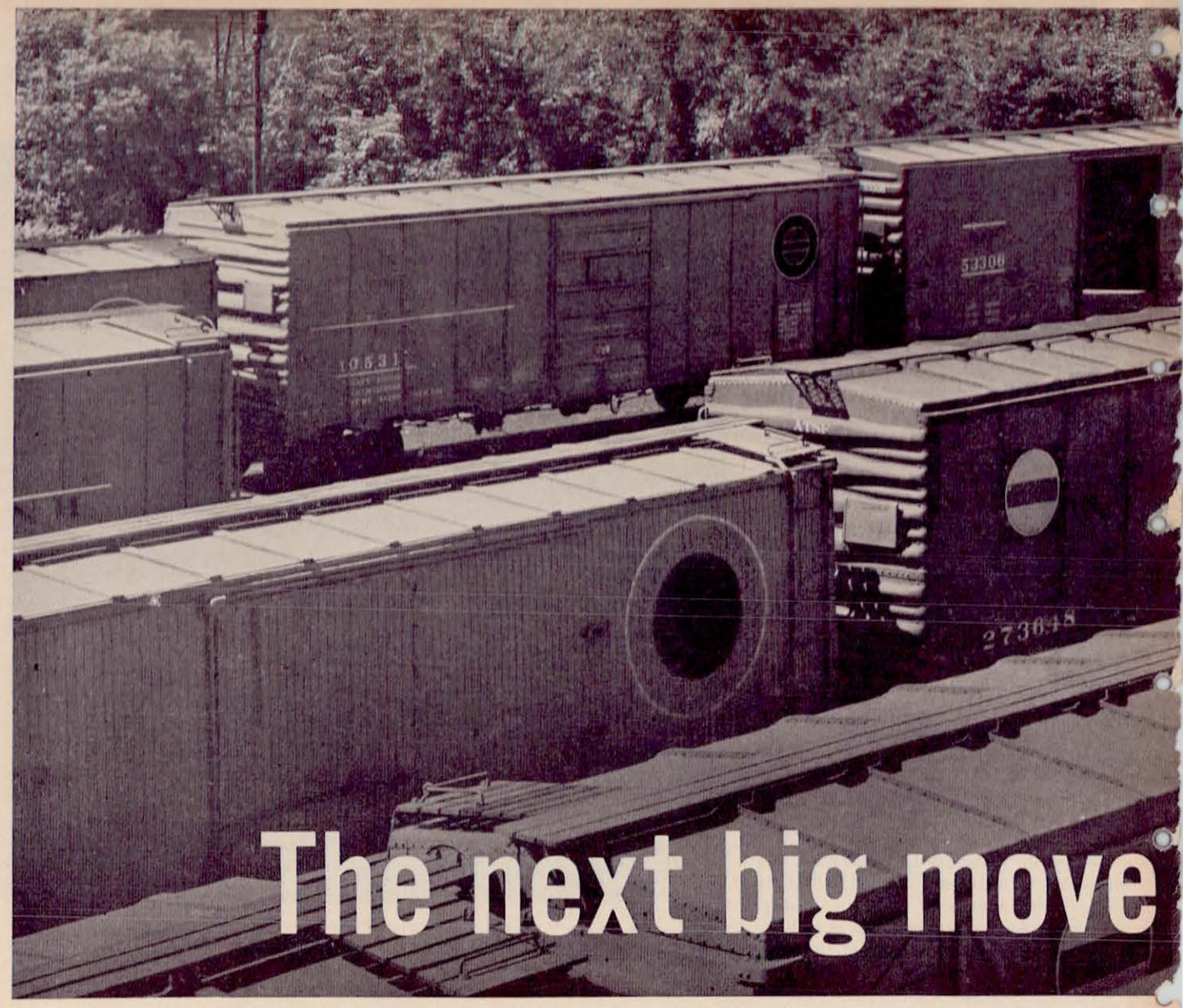
The car has a center-sill formed of 41.2-lb AAR sections. Body bolsters are formed from 24-in. wide-flange beams. The two transverse ridges are supported by 16-in. wide-flange beams. Cast diagonal braces are used between the transverse ridges and the upper sides. The 26 side stakes are hat sections pressed from ¼-in. plate. The cars have cast-steel hopper-door frames.

As with the standardized 70-ton car, the new cars have end floor sheets with a 42-deg 12-min slope from the end sheet to the bolster, and a 30-deg slope from there to the hopper openings. Upper floors are 5/16-in. plate; lower floors and transverse ridges, ⅜-in. plate. Side sheets are made of ¼-in. low-alloy, high-tensile, corrosion-resistant steel.

All plates which contact lading will be made of the LAHT steel. The N&W is not using the steel's higher tensile strength to reduce the thicknesses of body components. The components have the same dimensions which would have been used with carbon steel. This, it is predicted, will appreciably increase the life of the car's body.

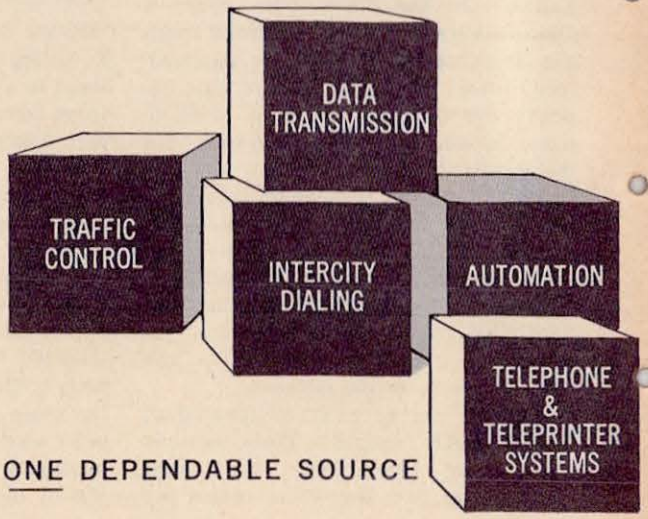
In designing the 85-ton car, it was decided that only four-wheel trucks could be justified in the quest for high capacity. The N&W began with 6½- by 12-in. journals, which allow an on-the-rail weight of 251,000 lb. However, not all N&W connections would accept a car with a gross weight of 251,000 lb. A car of 240,000-lb gross weight could pass through almost all N&W interchanges. Design work then proceeded with the aim of achieving maximum capacity within the 240,000-lb figure. Because of that goal, an 85-ton hopper was built, rather than the 90-ton car originally planned. The car has 6½- by 12-in. axles, roller bearings, and 36-in. multiple wear wheels. The large wheels reduce rail load concentrations.

Light weight of the 85-ton car is 61,000 lb. With that weight, it is not necessary to use empty-load brakes. The car has standard AB 10 by 12 single-shoe brakes.

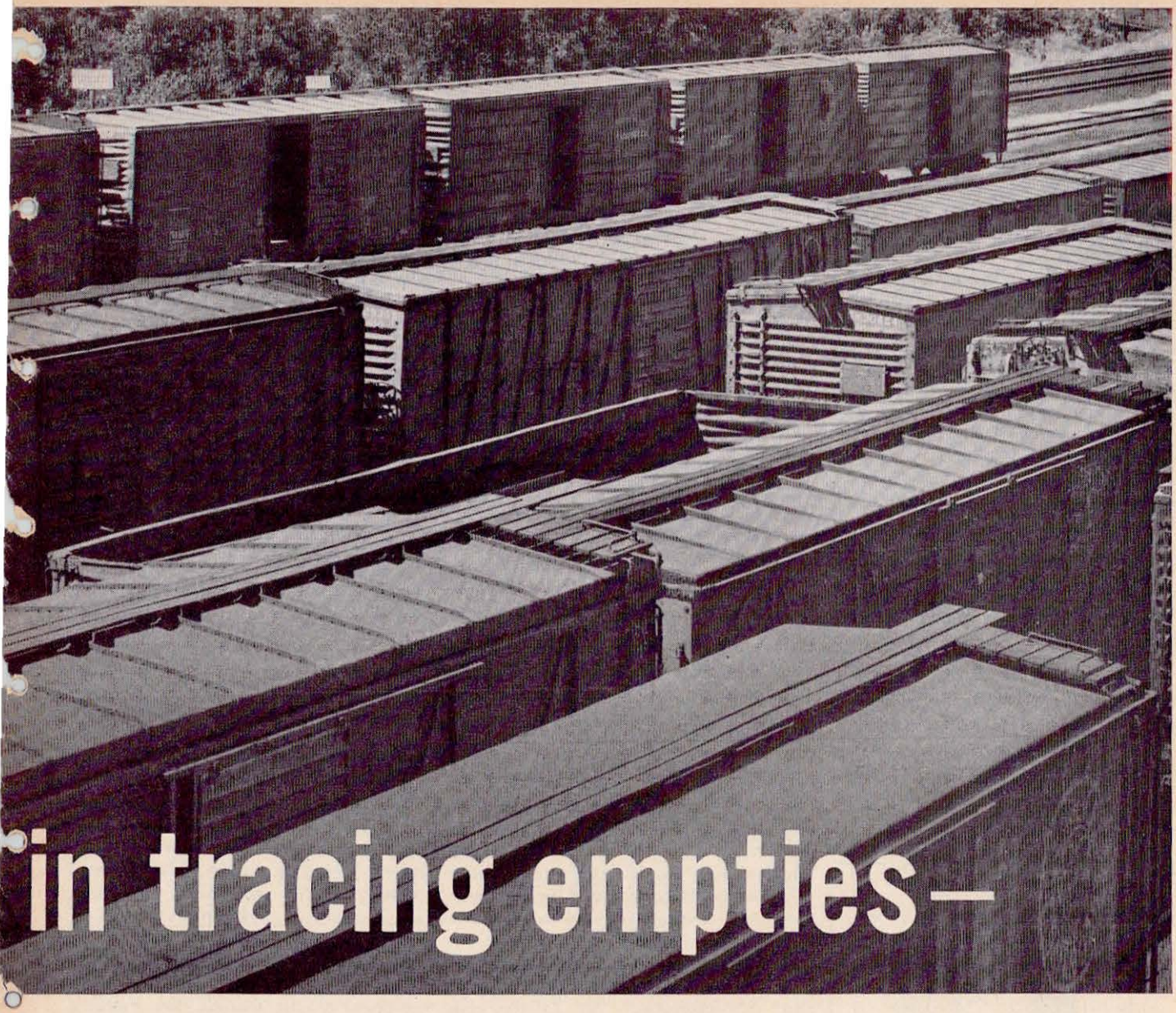


The next big move

high-speed system



ALL THE "BUILDING BLOCKS" YOU NEED—FROM ONE DEPENDABLE SOURCE



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For full details, phone (Fillmore 5-7111) or write the Director, Railway Sales, Automatic Electric Sales Corporation, Northlake, Illinois.

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Railroad Role in Field Tests Stressed

Railroads have an obligation to serve as field testing grounds for new products and ideas, Soo Line President G. Allan MacNamara told a group of railway suppliers recently in Chicago.

"From very close to the beginning when something new is in the making," he said, "we must recognize our stake in the development work you are doing. We should go as far as we possibly can in seeing that our track, our engines and rolling stock, our shops and our offices are your testing ground. Otherwise, I don't see how we can expect to get the most out of what you produce."

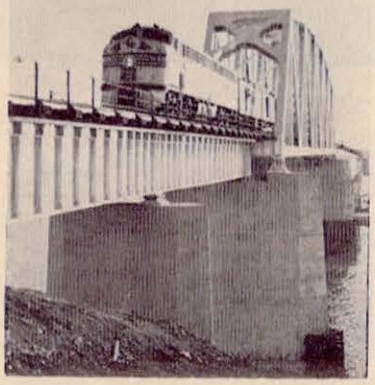
Evolution of a new piece of railroad machinery, he told the suppliers, "is quite simple, if everything works out right—we need it, you make it, we test it, you perfect it, we buy it."

Still, he cautioned, it isn't possible for a road like Soo Line to test every machine or process which suppliers may offer. Selection must be based on a determination of several factors:

- "Is the new machine something which will help solve a problem we have?"
- To what extent must supervisory time be assigned to the experiment while it's in progress?
- If the experimental machine must be introduced into an established work force or work process, to what extent will its introduction disrupt the organization and perhaps result in loss of production?

The Soo Line, Mr. McNamara commented, "has no hard and fast rules. We have gone along with experiments which have caused some loss in production or some extra supervisory hours because we knew that if they were successful we stood to gain more than we lost. We've declined to go along with others simply because we saw no way that we could profit by the experience or because we felt that we could not afford the disruption in the light of the possible benefits."

He urged suppliers to "bring us your ideas . . . in as complete form as you can. We have neither the time nor the money to point out what you already know needs improvement in your products. But we are equipped to put them to the test they will get in actual service. It is our obligation, wherever we possibly can, to see that those service tests are made."



CB&Q: New Bridge

CB&Q's eastbound Kansas City Zephyr crosses the main span of Burlington's new Mississippi River bridge at Quincy, Ill. The 2,500-ft structure is part of a $9,500,000 system which includes two shorter spans, a 716-ft Quincy Bay bridge and a 296-ft highway bridge. Opened late last month, the new bridge provides a 300-ft clear navigation channel with a 63-ft clearance above river elevation.

Transport Defense Gap Seen

President Daniel P. Loomis of the AAR warned last week that short-sighted government transportation policies have opened a "major gap" in the nation's defense.

Speaking at a luncheon given by the Washington, D.C., chapter of the National Defense Transportation Association in honor of the railroad industry's contribution to national security, Mr. Loomis declared that lack of "clearly defined and consistently applied public transportation policies" is draining away the strength and stamina of the railroads. He called for "new and clear thinking for the nuclear age"—such as is represented by the recent cooperative development and trial railroad runs of mobile missile-firing trains.

America can no longer count on advance warning as a safety factor in any new emergency, Mr. Loomis also said, adding: "The time for correction of deficiencies in our posture of transportation for defense is now and not at some vague, indefinite future time when we happen to get around to it."

The AAR president recalled that the railroads had a substantial reserve of capacity in equipment as well as ample basic rail facilities at the outset of World War II. But he pointed out that railroads today have no similar reserve. Noting that "lip service" only is generally given to the declared national transportation policy, he went on to say:

"If we are to be realistic instead of ritualistic, we cannot escape the conclusion that transportation developments resulting from short-sighted public policies involving mounting subsidies to railroad competitors, gross inequalities of taxation, and adherence to outmoded regulatory restrictions have weakened and continue progressively to weaken the essential transportation system of this nation for defense."

Trucker Wins Damage Suit

Riss & Co., a motor carrier, has been awarded $225,000 in its suit against railroads, railroad associations and the public relations firm of Carl Byoir & Associates. The suit alleged that the defendants were participants in an organized campaign to ruin the trucker's business, and the award, made in the federal district court for the District of Columbia, was based on a jury verdict against some of the defendants.

The jury's judgment was directed against five defendants, and it fixed the damages at $75,000. Pursuant to the Clayton Antitrust Act, on which the suit was based, the trial judge, Justice John J. Sirica, put this on a triple-damage basis, making the award $225,000.

Riss sought $90 million on the triple-damage basis. In addition to the $225,000, the five defendants must also pay the long-drawn-out case's costs.

The five are the Association of Western Railways, Traffic Executives Association—Eastern Railroads, Eastern Railroad Presidents Conference, the Pennsylvania, and Byoir. Originally, there were 85 defendants, but all but 28 were dropped from the case before it went to trial. Cleared by the jury verdict were the Association of American Railroads and 22 individual roads.

Riss brought the suit in 1954. The general burden of its complaint was that defendants had combined and conspired to oppose, harass, and impede the plaintiff's operations as an interstate trucker by solicitation of state and local legislative, regulatory and administrative action unfavorable to Riss.

New Mainline Motive Power

FROM GENERAL ELECTRIC

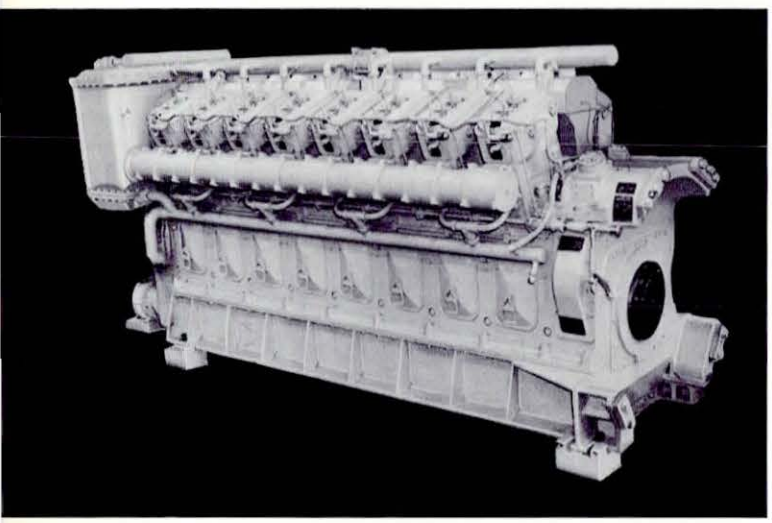
The General Electric U25B twenty-five hundred horsepower diesel-electric mainline locomotive — new from the rails up, with more power, less machinery — 65,000 pounds, 625-hp per axle — rugged simplicity over every inch of its length — a new standard of mainline motive power to provide faster, more reliable service at minimum cost.

For U25B Features that Make Possible New Levels of Mainline Performance, Turn to the Following Pages

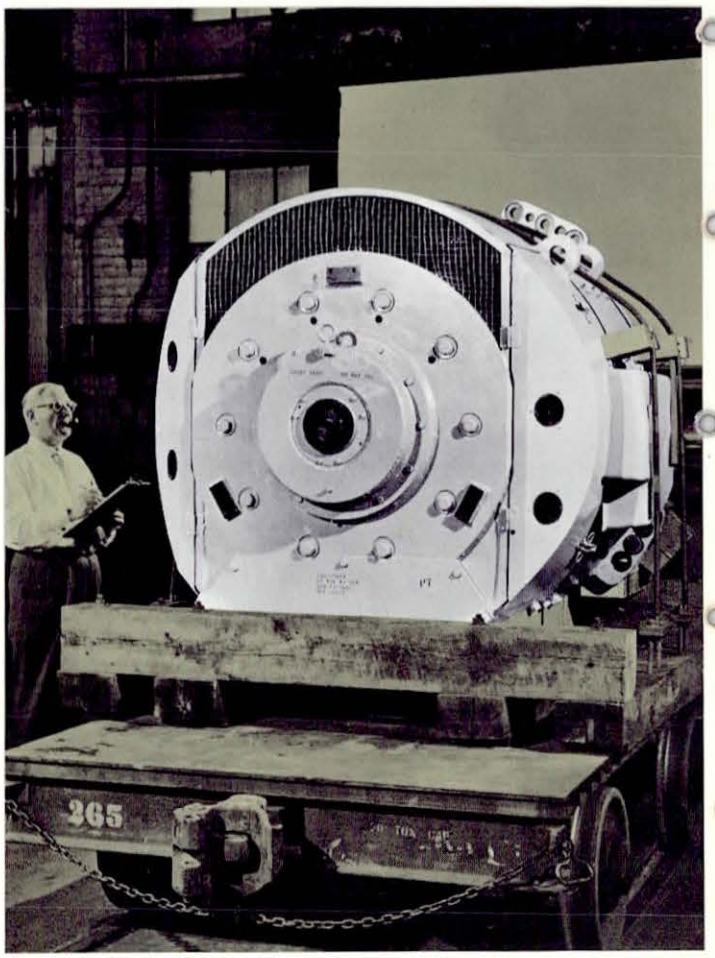
NEW GENERAL ELECTRIC U25B MAINLINE LOCOMOTIVE

first all-new diesel-electric locomotive in 15 years

. . . a carefully integrated design to meet the requirements of a new era of fast freight railroading, greater railroad competitiveness and profitability. *More power* — 50% greater than average mainline diesel-electric locomotives — enables the U25B to move freight faster. *Rugged simplicity* — 60% fewer electrical components, simplified mechanical design — establishes new standards of locomotive reliability and reduced maintenance. *Clean air* — through self-cleaning mechanical filters — reduces both cleaning costs and mechanical wear. The power, simplicity and cleanliness of the U25B offer significant savings in operating costs. With new G-E U25B locomotives, you can plan for maximum return on your equipment investment.



MORE POWER IN THE DIESEL ENGINE *— twenty-five hundred horsepower — gives the new General Electric U25B diesel-electric locomotive 50% greater power than average diesel-electric units now in mainline service. And, the U25B has ample capacity to meet the challenges of tomorrow's faster traffic schedules, or to maintain your present schedules with fewer units.*

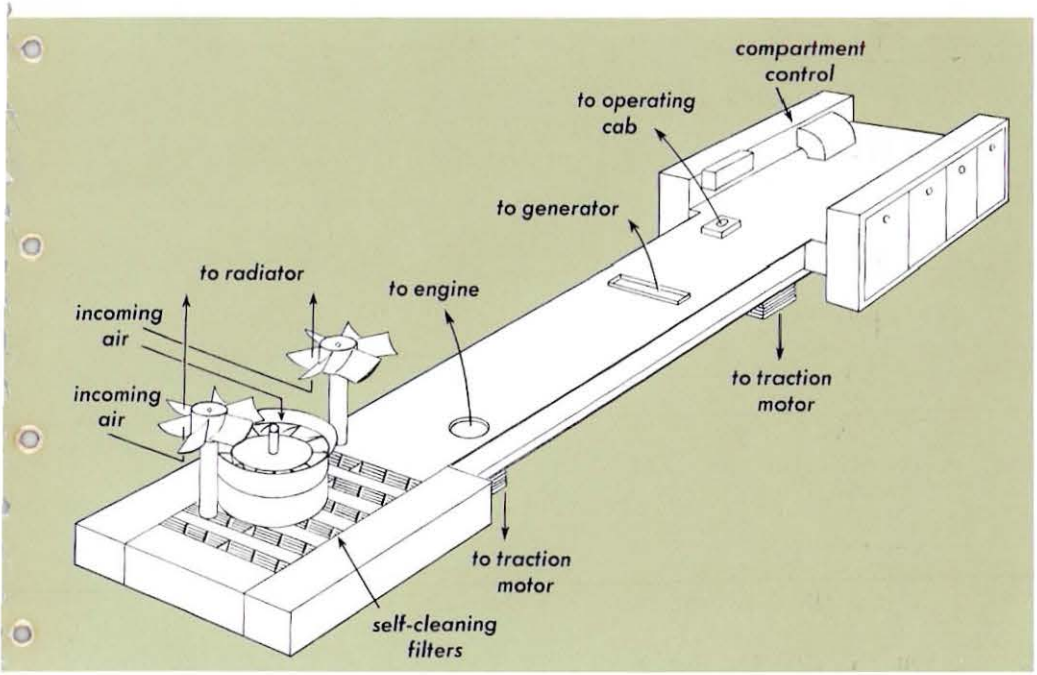


NEW MAIN GENERATOR HAS AMPLE CAPACITY, *meets peak load requirements with generous safety margin, is specifically designed for the high-powered General Electric U25B locomotive. New insulation system gives maximum protection against heat and moisture, adds another element of reliability to this General Electric locomotive.*

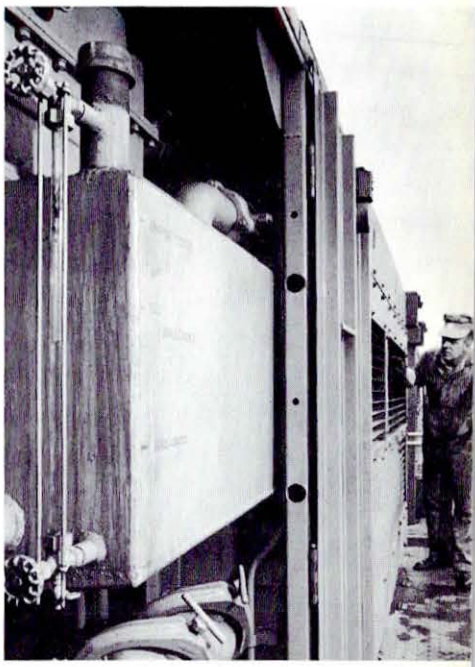
HIGHER ROAD SPEEDS
FASTER SCHEDULES

GREATER RELIABILITY
FEWER ROAD DELAYS

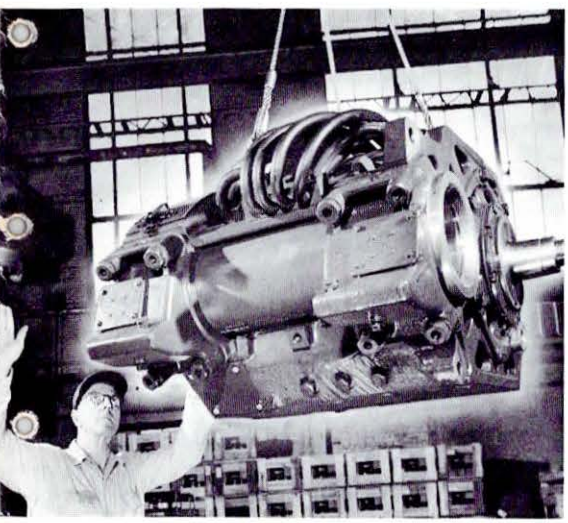
LOWER OPERATING COSTS
GREATER PROFITS



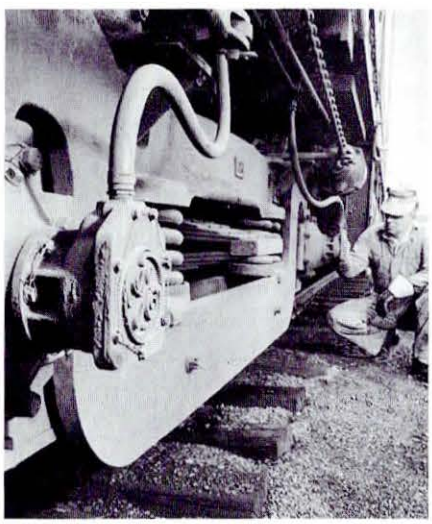
NEW FILTERED AIR SYSTEM *on the U25B — a major advance in locomotive design — assures longer apparatus life, greater reliability, lower cleaning costs. All air (except for radiators and dynamic brake) is supplied by one blower through self-cleaning mechanical filters.*



NEW ENGINE COOLING SYSTEM *on the G-E U25B locomotive eliminates all electrical devices and radiator shutters.*



POWERFUL GE-752 TRACTION MOTOR *—proved by millions of miles on high-powered diesel-electric, gas-turbine-electric and straight electric locomotives — assures rugged dependability, capability of continuous ratings exceeding 700 horsepower—another G-E added value.*

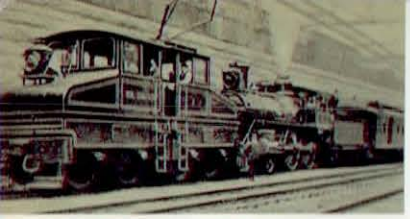


NEW ADHESION LOSS DETECTOR *— fast responding, the most effective automatic slip detection and correction method available — detects slips and slides at all speeds, corrects slip by a light application of independent air brakes before damage occurs.*

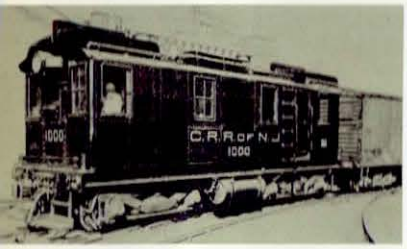
NEW PRESSURIZED CONTROL *compartment houses rugged, heavy duty components — seals out dirt and moisture, virtually eliminates routine maintenance. Compartment on the new U25B locomotive invites white glove inspection.*

Progress Is Our Most Important Product

GENERAL ELECTRIC

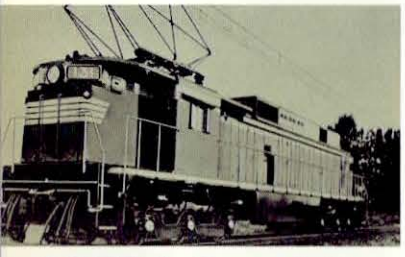


1895 *First Mainline Electric Locomotive*



1924 *First Diesel-Electric Locomotive*

1956 *Universal Diesel-Electric Export Locomotive*



1957 *Rectifier-type Freight Locomotive*

1958 *8500-hp Gas-Turbine-Electric Locomotive*

1960 : A NEW STANDARD OF MOTIVE POWER

Since 1890, General Electric has worked in partnership with the railroads to develop pioneering and continuing advancements in motive power. Seven years ago, the American railroad industry helped General Electric plan a new locomotive concept. The industry asked for a new locomotive . . . with greater horsepower . . . on four axles . . . reliable and economical to operate . . . and of simple design. Based on these present and future railroad needs, G-E engineers developed a new locomotive, combining a new, integrated approach with proven components.

THE GENERAL ELECTRIC U25B IS THAT LOCOMOTIVE

For further information about the new U25B, contact your General Electric Apparatus Sales Office or Locomotive and Car Equipment Department, General Electric Company, 2901 East Lake Road, Erie, Pennsylvania. 105-01

Progress Is Our Most Important Product

GENERAL ELECTRIC

What's Happening to Crossties?

► **The Story at a Glance: Since tie renewals generally have been declining for years and are now close to the record low, is it correct to assume that deterioration has taken place in the condition of ties in track? How do railroad men rate the condition of their ties today compared with ten years ago? Answers to these and other questions about crossties were contained in addresses presented during the recent annual meeting of the Railway Tie Association.**

In spite of the fact that tie renewals have been in a general downtrend since 1945, and have reached the lowest levels in history, the great majority of track maintenance officers say their general tie condition has not deteriorated in the last 10 years.

Only one of 18 railroads responding to a questionnaire on the subject said that such deterioration had taken place. Nine said that tie condition on their roads had actually improved during that period, and eight said it had remained about the same.

These statements were contained in an address by M. H. Dick, engineering editor of Railway Age, before the annual meeting of the Railway Tie Association in Cleveland. The sessions were directed by D. B. Frampton, Jr., president of the RTA.

In discussing the subject, "The Condition of the American Crosstie Today," Mr. Dick first ruled out the theory that business conditions have been the predominant factor in the downtrend of tie renewals. In making this point he noted that between 1946 and 1955 tie renewals were generally going down even though railroad net income was moving generally higher.

The paradoxical situation created by sub-normal tie renewals without a corresponding decline in the condition of ties can be explained, said Mr. Dick, by a "combination of factors that are acting all at the same time to depress tie renewals without building up any great amount of deferred maintenance in the tie condition." He had ascertained these factors, he said, through interviews with numerous track men.

Heading the list, and by far the most important, is the cyclical factor. Heavy insertions of treated ties in the 1940's established the pattern of an undulating tie-renewal curve that will extend far into the future. At the present time, tie renewals are in a trough of the curve.

Track men realize, said the speaker, that the curve will turn upward eventually, but most of them are not able to predict precisely when that will happen. None of the railroads queried expects tie renewals to recede below present levels. Eight expect their renewals to develop an uptrend sometime during the next several years, while 10 expect their tie insertions to continue at about the same level.

The universal use of machines for renewing ties was cited by Mr. Dick as another factor that track men say is helping to depress tie insertions. Tie renewals are now generally being made by specialized and highly mechanized gangs. Most roads feel therefore, that the number of ties to be inserted per mile must come up to a certain minimum before it is economical to put the gangs. Most roads feel, therefore, that may run anywhere from 100 to 250 ties per mile. If the number of bad ties doesn't measure up to this figure, no tie renewals are made in that particular territory, said Mr. Dick.

The use of machines has reduced tie renewals for another reason, he said. "In the days when ties were renewed by hand it was generally necessary to shovel a lot of ballast in taking out an old tie and inserting a new one. This being the case it was a fairly common practice when a tie had been dug out to take out the one next to it, simply because it was easy and not necessarily because the tie was in bad shape. With machines, on the other hand, it's just as easy to take out one tie as it is a half dozen in a row."

Track Men More Cost Conscious

The high cost of labor and materials has caused track men to become extremely cost conscious these days, declared Mr. Dick, adding that this was another factor behind the downtrend in tie renewals. This state of mind has caused many roads to take a close look at their tie practices, particularly those that have a bearing on the number of ties inserted.

"One result is that the local people—supervisors, roadmasters and division engineers—are apt to be somewhat generous in their estimates of tie requirements. There are various reasons for this. The main one is that the local supervisor has a sort of proprietary interest in his territory; he wants it to be in first-class shape. With this attitude it is understandable that he might mark ties to come out that have several years life left in them."

On many roads, said Mr. Dick, the practice now is for tie inspections to be made by tie markers working out of the main office. In general, under this system, fewer ties are being marked to come out.

As still another factor that is helping to hold tie renewals down without having an unfavorable effect on the over-all tie condition, Mr. Dick mentioned the use of means of making ties actually last longer, such as larger tie plates, better preservative treatment, dowels, tie pads and the incising of hardwood ties.

The importance of measures to prolong the life of ties was also brought out in an address by C. J. Plastre, chief tie and lumber supervisor, Atlantic Coast Line. Noting that the ACL has over 23 million ties in track, which cost about $5 each installed, "it can be seen," he said, "how important it is to get long service life."

Explaining the tie practices of his road, Mr. Plastre said that "with the passing of hewn pine and cypress. . . we have turned largely to sawn hardwoods." Because gum "is a very treacherous wood and is often decayed in the center while it looks good on the outside," ACL policy is to season all gum ties artificially.

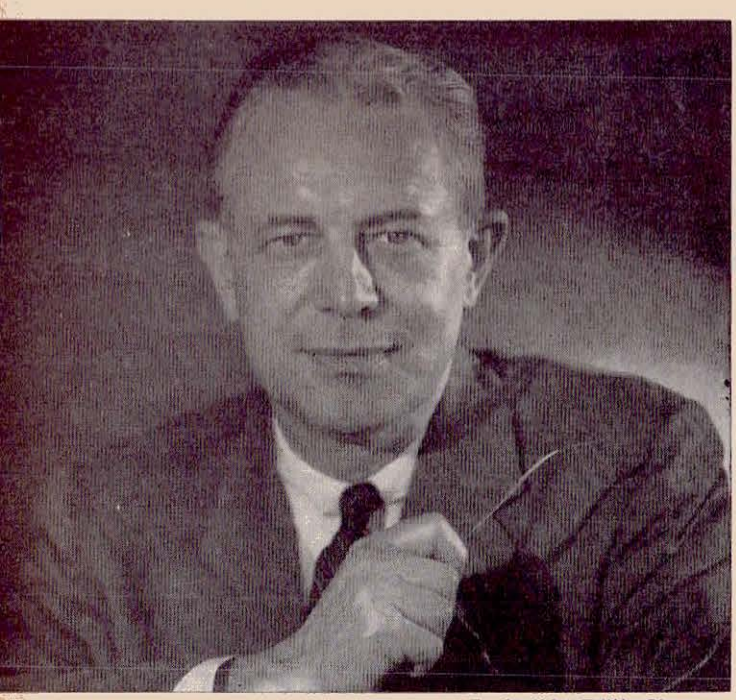
Another ACL practice explained by Mr. Plastre is to incise all ties promptly after they reach the treating plants. The first service tests of incised ties were made in 1953 along with other ties that were not incised. "After seven years, incised ties are far superior in appearance to ties not incised."

Other features on the program of direct interest to railroad men were an address by E. J. Brown, chief engineer of the Burlington Lines, and president of the American Railway Engineering Association, and a panel discussion on "The Future of Wood Crossties." With C. S. Burt, assistant to vice president, purchases and stores, Illinois Central, acting as moderator, the panel consisted of L. C. Collister, manager treating plants, Santa Fe; K. C. Edscorn, tie and timber agent, Missouri Pacific; and E. L. Kidd, assistant to chief tie and timber agent, Seaboard Air Line.

All panel members agreed that the wood crosstie has a good future. According to statements made by the panelists, this conclusion is based on two major premises: (1) that the railway industry will form a vital part of the economy of the future and (2) that there is nothing in sight in the way of economical substitute material.

"Railroads must mechanize to remain competitive"

says Mr. E. Frederic Uhrbrock, Jr., Railroad Security Analyst, Bear, Stearns & Company



Portrait by Editta Sherman

"Full benefit of diesel operation cannot be realized without complete automation of yards and CTC installations. Modern tools are essential for profitable operation."

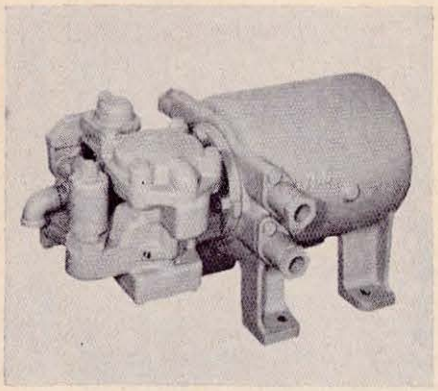
This prominent analyst put his finger on the most important word in the future of the railroad industry—*automation*. It's the practical way that the industry can expand its operation, while it reduces operating costs.

Roads with CTC and automatic classification yards have reported a 30 to 40% return on their investment. Contact Union Switch & Signal for the latest facts on traffic control and classification yard systems.

"Pioneers in Push-Button Science"

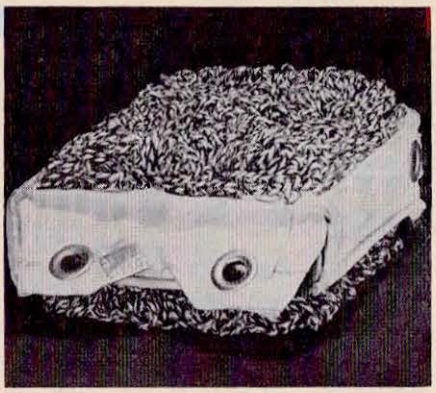
UNION SWITCH & SIGNAL
DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY
SWISSVALE, PENNSYLVANIA
NEW YORK... PITTSBURGH... CHICAGO... SAN FRANCISCO

New Products Report



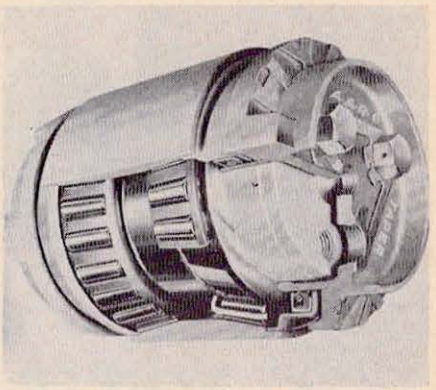
Distributing Valve

The 6-N distributing valve operating portion is a direct replacement of the 6-K operating portion of the No. 6-KR distributing valve. It permits upgrading of existing 14-EL, 6-DS, 6-BL, and 6-SL type locomotive brake equipments. It is said to reduce maintenance costs and eliminate stuck brakes and other limitations of the 6-K when up to six diesel units operate in multiple. *New York Air Brake Co., Dept. RA, 230 Park Ave., New York 17.*



Journal Lubricator

A dense loop pile prevents glazing of Crown Lubricator's heavy-duty, high-wicking, duck material casing. The fully reclaimable casing has been armor plated at critical wear points with abrasion-resistant nylon herringbone webbing and an extra thickness of high-wicking canvas. The Crown contains an acrylonitrile rubber core and is AAR Test Approved. *Journal Box Servicing Corp., Dept. RA, 332 S. Michigan Avenue, Chicago 4, Ill.*



Taper Freight Bearing

The Hyatt taper freight bearing, AAR approved for use in interchange, is for use both in pedestal and integral box truck side frames. It is available for 5½ by 10, 6 by 11, and 6½ by 12 journals. In piggyback service and on covered hoppers, taper bearings are said to be averaging 10,000 trouble-free miles a month. Box cars and gondolas will soon be equipped with them. *Hyatt Bearings Div., General Motors Corp., Dept. RA, Harrison, N.J.*

Ultrasonic Cleaner

The WE-50 ultrasonic cleaning system consists of a generator and a 10-gallon cleaning tank. The generator operates off 115 volts, 60-cycle ac. Internal dimensions of the tank are 19⅝ in. wide, 11⅜ in. long and 10 in. deep.

The WE-20 is similar but uses a 5-gallon tank with internal dimensions of 13⅞ in. wide, 11⅞ in. long and 8 in. deep. *Industrial Electronics Dept. RA, Westinghouse Electric Corp., 2519 Wilkens Ave., Baltimore 3, Md.*

Tool Pouch

A one-piece tool pouch molded from polyvinyl chloride is resilient, strong, remains pliable regardless of weather, has no stitches or rivets and will not absorb or be affected by water, oil or grease. It has three plier pockets, two screw driver pockets and a utility pocket. It is 8 in. wide by 10 in. high, and is available with or without a knife snap. *Mathias Klein & Sons, Dept. RA, 7200 McCormick Road, Chicago 45, Ill.*

Railroad Microwave

New microwave systems exceed the FCC technical standards which become effective Jan. 1, 1961. The type 14BW microwave for the 960 mc band is intended for use where voice channel requirements are modest. The type 14CW equipment for the 2,000 mc band can accommodate up to 24 channels of Budelman telephone carrier or 30 channels of single-sideband carrier. *Buldeman Electronics Corp., Dept. RA, 375 Fairfield Ave., Stamford, Conn.*

Self-Propelled Trencher

The T-66 trencher, with crawler treads, has a boom that telescopes from 26 in. to 40 in. An extension is available for greater depths. The trencher digs 3 in. to 4 in. wide down to 66 in. deep, or 12 in. wide 30 in. deep. The trencher has its own backfill blade and can backfill at about 2 mph. Trenching speeds are from 1 to 12 ft per min. The unit is 37 in. wide It weighs 1,350 lb. *Davis Mfg. Co., Dept. RA, 1500 South McLean Blvd., Wichita 13, Kan.*

Machine Communications

The IBM 1009 data transmission unit enables computers to hold direct two-way telephone or telegraph "conversations." An IBM 1401 computer equipped with a 1009 unit can transmit directly from its core memory to the core storage of another 1009-equipped 1401 at speeds up to 150 characters/second over telephone or high-speed telegraph lines. *International Business Machines Corp., Dept. RA, 112 East Post Road, White Plains, N.Y.*

Mobile Heaters

Perfection MH series heaters for trucks and railroad cars operate on gasoline, kerosene, fuel oil, diesel oil, or crankcase drainings, providing heat for passengers and operators, for window defrosting, for cargo, or for quick engine warm-up. Model MH-15, weighing 16 lb, generates 15,000 Btu per hr; MH-30 and MH-60, 30,000 and 60,000 Btu per hr, respectively. *Perfection Div., Hupp Corp., Dept. RA, 1135 Ivanhoe Road, Cleveland 10.*

STOP SHOCKS

where they start

Cut damage claims at the point of impact

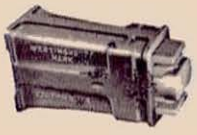
MARK 80

FRICTION DRAFT GEAR FOR 36-INCH POCKETS

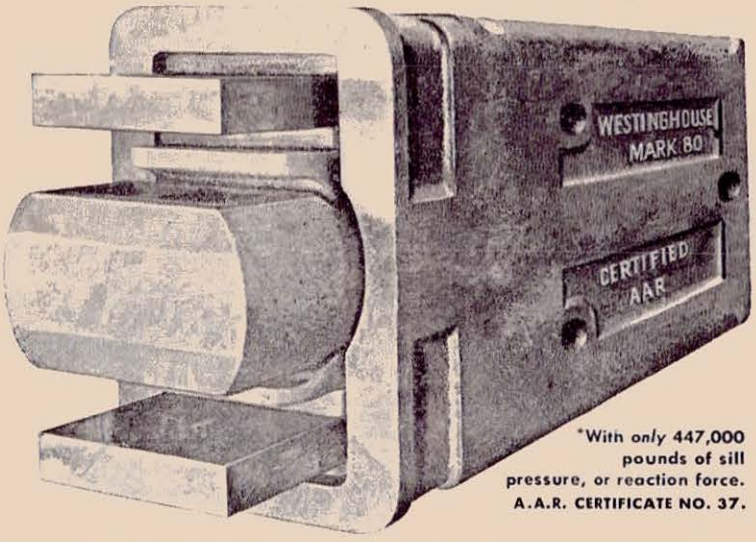
The big, tough MARK 80 is the answer to your need to *cut damage claims!*

You'll have 77,320 foot-pounds* of shock-softening power standing guard against overspeed impacts...right *at the point of impact*, where you *need* this protection. Shocks will be stopped before they reach the car body and lading. Today's traffic conditions require the heavier, tougher MARK 80.

To cut damage claims, take this modern step: Install MARK 80 Draft Gears, and watch the claims and car repair costs go *down!*



For *standard* 24⅝ inch pockets, specify the Westinghouse Mark 40 (high capacity) Draft Gear... or Westinghouse NY-11-F Draft Gear.



*With *only* 447,000 pounds of sill pressure, or reaction force.
A.A.R. CERTIFICATE NO. 37.

CARDWELL WESTINGHOUSE COMPANY

332 South Michigan Avenue, Chicago 4, Illinois • Canadian Cardwell Co., Ltd., Montreal 18, Quebec

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1960

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1960	Total (inc. misc.) 1959	Operating Expenses: Maint. Way and Structures: Total 1960	Total 1959	Deprec and Retirements	Total 1960	Maint. Equipment: Total 1959	Deprec. and Retirements	Traffic	Transportation	Total 1960	Total 1959	Operating ratio 1960	Operating ratio 1959	Net from railway operation	Railway tax accruals	Net Railway operating income 1960	Net Railway operating income 1959
Akron, Canton & Youngstown	Aug.	171	478	....	490	443	54	53	6	78	76	16	44	159	381	365	77.7	82.5	109	65	31	15
	8 mos.	171	3,875	....	3,977	4,087	457	477	45	625	600	124	369	1,265	3,092	3,035	77.7	74.3	885	551	274	312
Alabama, Tennessee & Northern	Aug.	214	196	....	198	255	56	50	6	13	11	6	5	77	153	154	77.6	60.3	44	7	—7	12
	8 mos.	214	1,815	....	1,843	2,314	436	399	51	110	93	45	36	694	1,304	1,221	70.8	52.8	539	66	37	195
Atchison, Topeka & Santa Fe	Aug.	12,970	39,914	4,553	49,362	46,951	7,248	6,820	967	11,387	11,116	2,408	1,457	19,647	42,376	41,686	85.8	88.8	6,986	3,829	2,299	2,068
	8 mos.	12,970	348,571	28,034	414,147	428,059	53,656	54,023	6,252	86,047	85,260	19,462	11,384	153,317	323,562	319,801	78.1	74.7	90,585	54,051	30,366	40,565
Atlanta & St. Andrews Bay	Aug.	81	262	....	268	356	24	38	3	31	30	8	7	72	155	175	57.9	49.1	113	45	26	58
	8 mos.	81	2,378	....	2,420	2,681	263	324	28	231	248	63	57	595	1,330	1,412	54.9	52.7	1,091	479	307	409
Atlanta & West Point	Aug.	93	228	27	308	324	40	37	8	48	59	14	18	132	260	267	84.5	82.5	48	17	1	23
	8 mos.	93	1,871	195	2,460	2,536	327	328	63	398	422	113	145	1,039	2,085	2,129	84.8	84.0	375	144	24	85
Western of Alabama	Aug.	133	261	25	329	346	50	49	10	53	58	19	22	136	283	284	86.1	81.9	46	33	6	23
	8 mos.	133	2,172	181	2,663	2,817	366	407	78	471	473	152	171	1,107	2,294	2,316	86.2	82.2	368	288	63	159
Atlantic Coast Line	Aug.	5,572	10,301	1,149	12,362	12,316	1,402	1,853	185	2,581	2,420	702	503	5,287	10,592	10,518	85.7	85.4	1,771	1,100	327	657
	8 mos.	5,573	92,402	11,228	111,843	109,281	14,935	15,976	1,430	20,310	19,752	5,474	4,063	43,765	89,384	88,526	79.9	81.0	22,459	11,050	6,427	7,209
Baltimore & Ohio	Aug.	5,909	28,134	1,326	32,021	29,847	3,601	3,163	509	5,934	5,445	1,030	921	14,622	27,012	24,812	84.4	83.1	5,009	2,461	34	1,128
	8 mos.	5,909	230,467	11,280	262,889	266,632	28,955	29,142	4,066	51,784	48,225	8,591	7,620	116,297	220,096	214,283	83.7	80.4	42,793	19,973	6,076	20,516
Staten Island Rapid Transit	Aug.	29	175	92	271	275	77	42	20	49	43	—2	2	165	326	279	120.3	101.4	—55	50	—123	—76
	8 mos.	29	1,331	723	2,119	2,198	476	423	103	371	316	10	17	1,231	2,349	2,284	110.9	103.9	—230	398	—781	—653
Bangor & Aroostook	Aug.	596	709	23	775	724	161	159	28	278	242	108	32	285	829	790	107.1	109.1	—55	111	84	134
	8 mos.	596	9,219	160	9,475	9,491	2,400	2,286	174	2,205	2,272	877	274	2,906	8,457	8,386	86.8	88.4	1,287	815	1,510	1,308
Bessemer & Lake Erie	Aug.	203	1,796	....	1,893	386	335	240	26	746	544	141	45	479	1,779	1,268	94.0	328.6	114	332	164	—272
	8 mos.	203	16,169	....	16,832	14,876	2,149	1,952	204	4,944	5,141	685	302	3,873	12,712	12,310	75.5	82.8	4,120	4,163	2,899	2,281
Boston & Maine	Aug.	1,557	4,435	588	5,417	5,295	564	770	150	794	816	219	158	2,454	4,287	4,632	79.1	87.5	1,130	471	112	—339
	8 mos.	1,557	38,601	4,074	46,253	49,232	5,160	6,351	1,180	6,821	7,001	1,955	1,297	19,763	35,836	39,834	77.5	80.9	10,417	3,703	2,316	1,223
CPR Lines in Maine	Aug.	234	345	58	426	467	85	125	20	38	81	18	20	135	309	418	72.5	89.7	117	31	42	—43
	8 mos.	234	5,385	367	5,974	5,684	747	1,060	162	753	894	140	161	1,492	3,380	3,762	56.6	66.2	2,594	269	1,646	996
Carolina & Northwestern	Aug.	284	270	....	276	269	36	45	7	32	31	21	6	76	162	178	58.8	66.3	114	18	60	30
	8 mos.	284	2,030	....	2,075	2,201	261	369	57	228	248	168	43	627	1,268	1,424	61.1	64.7	806	158	298	226
Central of Georgia	Aug.	1,745	2,894	122	3,215	3,631	477	586	66	648	746	198	166	1,411	2,902	3,163	90.3	87.1	313	275	71	240
	8 mos.	1,745	25,441	1,000	28,095	29,475	4,370	4,624	376	5,854	5,600	1,519	1,381	11,593	24,786	24,889	88.2	84.4	3,309	2,235	1,094	2,535
Central of New Jersey	Aug.	593	3,313	443	4,117	4,276	453	448	—96	697	706	151	76	2,090	3,518	3,586	85.4	83.9	599	516	—200	130
	8 mos.	594	27,279	3,740	33,931	35,132	3,825	4,014	773	5,313	6,390	856	602	16,975	28,577	30,120	84.2	85.7	5,353	4,011	—1,419	—190
Central Vermont	Aug.	375	732	60	853	897	230	222	22	116	100	9	18	386	789	733	92.5	81.7	64	59	—120	—15
	8 mos.	375	5,609	431	6,563	7,113	1,514	1,540	144	914	887	75	151	2,737	5,631	5,734	85.8	80.6	932	451	—403	—28
Chesapeake & Ohio	Aug.	5,122	27,489	582	30,037	27,387	3,600	3,100	472	5,438	4,915	1,899	888	11,338	22,921	20,931	76.3	76.4	7,116	3,393	4,296	4,015
	8 mos.	5,122	216,193	4,133	232,469	233,940	26,900	25,730	3,774	42,302	40,979	15,201	6,725	85,994	174,778	172,450	75.2	73.7	57,691	27,763	32,854	37,090
Chicago & Eastern Illinois	Aug.	862	2,330	233	2,837	2,830	359	361	33	556	513	179	143	1,245	2,473	2,359	87.2	83.4	364	247	—148	—22
	8 mos.	862	19,516	1,474	23,225	24,508	2,951	2,891	251	4,307	3,995	1,449	1,113	9,590	19,366	19,039	83.4	77.7	3,859	1,878	428	1,854
Chicago & Illinois Midland	Aug.	121	674	....	691	665	53	42	11	130	93	23	31	164	428	363	61.9	54.5	263	141	110	116
	8 mos.	121	4,813	....	4,925	4,779	374	341	66	885	801	185	243	1,241	3,132	2,916	63.6	61.0	1,793	1,012	681	737
Chicago & North Western	Aug.	9,280	17,393	1,823	20,277	18,312	3,256	2,883	415	3,272	3,274	1,021	560	7,600	15,698	15,253	77.4	83.3	4,579	1,461	1,441	562
	8 mos.	9,280	117,908	11,842	138,835	147,021	22,570	23,922	3,221	24,052	24,824	8,279	4,474	58,637	117,958	124,723	85.0	84.8	20,877	11,180	1,593	4,394
Chicago, Burlington & Quincy	Aug.	8,660	18,493	2,346	22,945	22,443	3,131	3,006	415	4,275	4,007	1,113	624	9,029	18,213	17,684	79.4	78.8	4,732	2,139	1,489	1,712
	8 mos.	8,662	132,699	14,918	164,656	175,304	22,113	24,712	3,205	31,336	34,649	8,749	5,108	67,838	134,802	142,717	81.9	81.4	29,854	16,321	10,785	12,145
Chicago Great Western	Aug.	1,469	2,637	9	2,834	2,937	440	456	52	475	413	130	117	1,038	2,154	2,097	76.0	71.4	679	198	154	285
	8 mos.	1,469	20,245	72	21,881	22,925	2,858	3,355	364	3,438	3,416	1,027	987	7,841	15,802	16,122	72.2	70.3	6,079	2,261	1,658	2,559
Chic., Milw., St. Paul & Pac	Aug.	10,598	19,410	1,719	23,377	21,880	3,213	3,808	440	3,413	3,775	887	566	8,476	17,022	17,777	72.8	81.2	6,355	1,806	2,812	1,442
	8 mos.	10,598	126,083	10,465	153,060	163,234	23,681	26,447	3,457	26,714	28,598	7,056	4,555	62,742	127,555	135,147	83.3	82.8	25,505	13,711	3,881	8,331
Chicago, Rock Island & Pacific	Aug.	7,541	14,946	1,570	18,184	17,258	2,697	2,614	275	3,126	2,880	661	537	7,372	14,754	13,935	81.1	80.7	3,430	1,361	728	527
	8 mos.	7,532	121,632	11,437	146,613	152,204	19,663	19,843	2,049	24,609	25,784	5,296	4,417	59,172	115,754	117,536	79.0	77.2	30,859	13,134	6,387	8,194
Clinchfield	Aug.	293	1,606	....	1,614	1,713	228	185	22	334	349	107	69	426	1,127	1,101	69.8	64.2	487	200	465	573
	8 mos.	293	13,272	....	13,346	14,136	1,549	1,713	179	2,684	2,553	853	530	3,518	8,832	8,861	66.2	62.7	4,515	1,647	3,936	4,812
Colorado & Southern	Aug.	712	1,194	106	1,449	1,235	328	251	23	196	290	81	35	616	1,251	1,185	86.4	96.0	198	114	56	18
	8 mos.	712	8,570	688	10,520	10,910	1,484	2,173	179	1,679	1,924	632	282	4,389	8,412	9,399	80.0	86.2	2,108	1,196	807	440
Ft. Worth & Denver	Aug.	1,362	1,518	216	1,966	2,313	307	259	31	288	284	46	69	881	1,678	1,664	85.3	71.9	288	96	25	147
	8 mos.	1,362	13,430	1,264	16,464	16,962	1,949	3,030	262	2,041	2,323	369	574	6,759	12,354	13,878	75.0	81.8	4,110	1,399	818	353
Colorado & Wyoming	Aug.	39	132	....	222	41	17	5	4	31	18	12	2	99	168	58	75.6	141.7	54	40	12	—22
	8 mos.	39	1,475	....	2,690	2,656	174	153	19	247	279	100	17	1,034	1,615	1,467	60.0	55.3	1,075	662	369	449
Delaware & Hudson	Aug.	763	3,180	174	3,479	3,574	573	437	83	665	591	200	103	1,382	2,969	2,773	85.4	77.6	509	396	139	523
	8 mos.	763	27,479	1,051	29,653	30,850	3,517	3,398	507	6,488	5,527	1,593	864	11,216	24,217	23,644	81.7	76.6	5,436	3,059	2,893	4,121
Delaware, Lack. & Western	Aug.	941	4,247	780	5,773	5,609	496	509	148	973	994	333	193	3,204	5,252	5,107	91.0	91.1	520	695	—339	—292
	8 mos.	941	34,624	6,085	46,717	48,090	4,533	4,356	1,199	8,346	8,201	2,707	1,593	24,769	42,296	42,257	90.5	87.9	4,421	5,429	—2,795	—443
Denver & Rio Grande Western	Aug.	2,128	6,255	364	6,838	6,523	737	664	110	980	867	331	238	2,188	4,470	4,149	65.4	63.6	2,367	1,304	970	975
	8 mos.	2,128	47,240	2,136	51,046	50,330	5,933	6,121	777	7,796	7,551	2,616	1,897	16,479	34,578	34,437	67.7	68.4	16,467	9,483	6,871	7,243
Detroit & Toledo Shore Line	Aug.	50	449	....	492	543	56	57	4	66	76	24	20	211	369	392	75.1	72.2	122	42	11	20
	8 mos.	50	4,424	....	4,765	5,346	454	498	31	589	679	193	163	1,837	3,181	3,359	66.8	62.8	1,584	557	242	409
Detroit, Toledo & Ironton	Aug.	465	1,323	....	1,437	1,373	158	185	31	423	365	153	58	482	1,220	1,136	84.9	82.7	217	121	97	112
	8 mos.	465	13,191	....	13,917	14,896	1,893	2,038	228	3,442	3,219	1,210	466	3,997	10,571	10,501	76.0	70.5	3,346	973	2,357	3,171
Duluth, Miss. & Iron Range	Aug.	575	5,676	2	6,622	439	617	408	69	623	482	218	16	1,769	3,351	1,724	50.6	393.0	3,270	1,889	1,356	—638
	8 mos.	575	29,752	8	34,818	24,916	4,167	4,033	608	5,384	4,688	1,666	110	10,286	22,229	19,243	63.8	77.2	12,589	7,711	4,823	1,754
Duluth, So. Shore & Atlantic	Aug.	544	575	3	604	477	124	127	16	109	102	26	31	229	515	501	85.3	105.0	89	44	33	—15
	8 mos.	544	4,428	20	4,717	4,765	871	942	100	878	896	209	265	1,678	3,886	3,961	82.4	83.1	831	342	381	428

(Continued on next page)

a RAILWAY AGE Service Page

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1960

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1960	Total (inc. misc.) 1959	Operating Expenses: Maint. Way and Structures: Total 1960	Total 1959	Deprec and Ret re-ments	Maint. Equipment: Total 1960	Total 1959	Deprec. and Retire-ments	Traffic	Trans-portation	Total 1960	Total 1959	Operating ratio 1960	ratio 1959	Net from railway operation	Railway tax accruals	Net Railway operating income 1960	1959
Duluth, Winnipeg & Pacific	Aug.	175	467	....	467	517	178	191	7	41	60	1	7	183	419	459	89.8	88.8	48	43	—66	—69
	8 mos.	175	3,704	5	3,738	3,937	944	889	43	438	477	9	58	1,455	2,978	2,975	79.7	75.5	760	344	—224	—48
Elgin, Joliet & Eastern	Aug.	205	2,702	....	3,536	1,149	404	174	28	1,053	265	130	47	1,472	3,341	1,485	94.5	129.2	195	197	—111	—209
	8 mos.	205	26,498	....	35,241	34,022	2,882	2,408	227	7,271	6,020	997	367	13,682	27,162	24,642	77.1	72.4	8,079	4,522	1,441	2,336
Erie Railroad	Aug.	2,239	10,376	610	12,086	11,368	1,619	1,440	231	2,089	2,104	547	362	6,169	11,033	10,645	91.3	93.6	1,053	1,277	—1,149	—1,277
	8 mos.	2,239	88,636	4,611	102,140	104,244	11,678	11,883	1,837	17,576	17,130	4,424	2,936	49,395	87,649	88,433	85.8	84.8	14,491	9,818	—1,987	360
Florida East Coast	Aug.	572	1,469	340	2,004	2,200	214	335	53	349	433	115	69	911	1,708	1,978	85.2	89.9	296	182	—37	—179
	8 mos.	572	15,790	3,646	21,535	22,798	2,734	3,325	376	3,880	4,423	932	656	8,354	17,101	18,814	79.4	82.5	4,434	1,687	976	505
Georgia Railroad	Aug.	321	525	20	630	713	81	85	9	110	121	34	40	289	557	599	88.5	84.0	73	40	24	100
	8 mos.	321	4,231	138	5,050	5,424	653	756	68	897	990	266	317	2,328	4,502	4,889	89.1	90.1	548	332	308	333
Georgia & Florida	Aug.	321	308	....	313	277	107	62	3	38	38	10	22	89	275	231	87.8	83.4	38	21	—8	4
	8 mos.	321	2,187	....	2,234	2,357	908	603	29	329	330	80	179	707	2,279	2,020	102.0	85.7	—45	168	—359	—22
Grand Trunk Western	Aug.	951	2,863	312	3,500	4,230	741	763	59	936	815	110	89	2,037	4,051	4,202	115.7	99.3	—551	400	—1,425	—1,039
	8 mos.	951	32,033	1,799	37,235	40,233	5,663	5,583	507	6,728	7,287	890	747	17,874	32,981	35,315	88.6	87.8	4,254	3,244	—2,783	—3,068
Great Northern	Aug.	8,290	20,570	1,034	23,514	22,934	4,029	4,148	387	4,172	4,171	904	538	8,592	18,473	17,957	78.6	78.3	5,041	3,037	1,412	1,360
	8 mos.	8,297	142,366	6,489	160,999	168,116	26,625	27,851	2,640	31,208	31,981	7,028	4,544	60,217	130,605	133,150	81.1	79.2	30,394	18,429	9,401	12,229
Green Bay & Western	Aug.	219	321	....	337	412	78	83	5	39	50	9	27	126	295	318	87.7	77.1	41	16	—18	16
	8 mos.	219	2,785	....	2,893	3,182	455	509	38	372	378	69	224	959	2,209	2,308	76.4	72.5	684	333	67	213
Gulf, Mobile & Ohio	Aug.	2,752	5,467	255	6,129	6,707	793	850	77	1,256	1,289	294	268	2,283	4,919	5,105	80.3	76.1	1,210	561	233	447
	8 mos.	2,752	45,857	1,906	51,233	54,612	6,904	7,292	613	10,579	10,854	2,351	2,276	18,342	40,828	42,027	79.7	77.0	10,405	4,504	2,629	3,574
Illinois Central	Aug.	6,500	17,591	2,112	21,839	21,884	3,084	2,860	414	4,017	3,875	873	641	8,514	17,349	16,745	79.4	76.5	4,490	2,693	1,166	1,731
	8 mos.	6,500	139,161	15,118	172,597	178,176	25,714	26,216	3,044	33,365	33,436	6,895	5,185	68,599	141,633	143,021	82.1	80.3	30,965	17,497	7,587	11,699
Illinois Terminal	Aug.	335	794	....	869	946	77	110	3	124	143	27	44	349	649	733	74.7	77.5	220	68	20	20
	8 mos.	335	5,596	....	6,282	7,160	628	852	25	1,136	1,523	214	372	2,590	5,173	6,100	82.3	85.2	1,109	284	48	—38
Kansas City Southern	Aug.	891	3,171	93	3,602	3,708	224	269	48	553	493	113	93	1,202	2,201	2,164	61.1	58.4	1,401	523	635	641
	8 mos.	891	25,993	611	29,412	30,590	2,180	2,414	391	4,102	4,106	905	771	9,492	17,592	17,727	59.8	57.9	11,821	4,881	4,899	5,384
Kansas, Oklahoma & Gulf	Aug.	328	469	....	469	352	39	76	7	28	29	14	32	116	244	259	52.0	73.6	225	33	152	15
	8 mos.	327	3,411	....	3,452	3,755	297	512	60	303	279	98	266	889	1,991	2,062	57.7	54.9	1,462	619	499	598
Lake Superior & Ishpeming	Aug.	160	558	....	720	82	79	59	12	91	57	36	2	155	349	193	48.5	235.5	371	214	163	—44
	8 mos.	160	2,909	....	3,762	2,947	495	702	96	625	527	284	17	930	2,219	2,214	59.0	75.1	1,543	955	681	368
Lehigh & Hudson River	Aug.	96	267	....	270	273	29	29	2	31	28	8	15	101	194	198	71.8	72.5	76	27	13	10
	8 mos.	96	2,083	....	2,094	2,247	209	248	20	244	238	67	130	845	1,577	1,636	75.3	72.8	517	179	44	77
Lehigh & New England	Aug.	177	318	....	323	532	44	62	7	203	179	37	8	169	479	523	148.3	98.3	—156	28	—104	74
	8 mos.	177	2,628	....	2,658	3,994	358	504	61	1,456	1,309	303	104	1,305	3,630	4,029	136.6	100.9	—972	225	—559	702
Lehigh Valley	Aug.	1,127	3,909	107	4,194	4,159	578	433	98	681	591	199	134	2,197	3,802	3,638	90.6	87.5	393	461	249	4
	8 mos.	1,127	32,384	944	34,854	36,697	4,756	4,375	776	6,173	6,390	1,400	1,091	18,144	31,984	33,303	91.8	90.8	2,870	3,739	—2,579	—1,509
Long Island	Aug.	344	808	3,816	4,808	6,080	731	817	100	992	1,102	169	47	2,698	4,699	5,076	97.7	83.5	108	390	—471	349
	8 mos.	344	7,170	33,008	41,798	45,951	6,333	6,464	833	8,225	8,827	1,352	353	21,785	38,444	40,664	92.0	88.5	3,354	3,184	—1,496	552
Louisiana & Arkansas	Aug.	746	1,749	48	1,876	2,184	166	189	20	292	323	98	76	700	1,312	1,376	69.9	63.0	564	303	149	271
	8 mos.	746	15,270	334	16,557	16,921	1,626	1,582	187	2,478	2,401	783	630	5,451	10,822	10,696	65.4	63.2	5,734	2,890	1,917	2,209
Louisville & Nashville	Aug.	5,684	16,503	891	18,665	17,645	2,600	2,501	309	4,100	3,242	1,173	525	7,809	16,032	14,507	85.9	82.2	2,634	1,952	1,261	1,336
	8 mos.	5,684	134,307	5,973	151,443	152,226	17,900	21,365	2,516	33,140	31,387	9,258	4,062	60,800	123,573	124,282	81.6	81.6	27,870	19,081	10,738	11,472
Maine Central	Aug.	936	1,745	33	1,910	1,901	359	350	29	369	363	82	32	757	1,622	1,567	84.9	82.5	288	72	152	136
	8 mos.	936	15,378	200	16,595	16,634	2,811	2,939	229	2,988	3,018	662	251	5,930	12,867	13,484	77.5	81.1	3,728	1,674	1,373	1,139
Minneapolis & St. Louis	Aug.	1,391	1,796	....	1,835	1,798	278	320	31	249	285	101	113	640	1,419	1,492	77.3	83.0	417	199	103	124
	8 mos.	1,391	13,166	3	13,523	14,664	1,980	2,316	234	2,232	2,605	806	956	5,002	11,288	12,249	83.5	83.5	2,234	1,310	524	966
Minn., Northfield & Southern	Aug.	77	315	....	344	330	51	32	3	34	34	13	35	89	245	229	71.3	69.5	99	65	35	35
	8 mos.	77	2,386	....	2,525	2,981	207	188	21	329	323	103	280	693	1,809	1,831	71.6	61.4	716	456	227	428
Minn., St. Paul & S. Ste. Marie	Aug.	3,222	3,705	84	4,004	4,061	479	875	49	585	603	142	112	1,483	2,899	3,343	72.4	82.3	1,105	331	531	244
	8 mos.	3,222	23,870	462	25,628	28,124	4,398	5,477	391	4,892	5,640	1,150	883	10,928	22,856	25,145	89.2	89.4	2,772	1,914	354	145
Missouri-Illinois	Aug.	172	419	....	419	426	46	48	4	89	82	40	15	129	291	287	69.6	67.4	127	118	58	73
	8 mos.	172	3,547	....	3,569	3,645	323	353	44	733	720	320	114	1,059	2,327	2,312	65.2	63.4	1,242	1,059	555	716
M-K-T Lines	Aug.	2,917	4,783	100	5,311	5,003	657	480	84	1,112	1,091	262	181	1,886	4,073	3,740	76.7	74.8	1,238	344	322	329
	8 mos.	2,917	35,170	619	38,801	40,357	4,261	4,520	695	7,832	8,254	2,098	1,414	14,180	29,317	30,162	75.6	74.7	9,484	2,804	2,549	2,818
Missouri Pacific	Aug.	9,406	21,917	1,218	25,616	25,699	3,660	3,618	336	4,553	4,485	1,157	759	9,745	19,780	19,506	77.2	75.9	5,837	2,058	2,751	2,737
	8 mos.	9,412	174,232	7,912	201,247	204,399	27,606	27,701	2,583	34,958	35,068	8,327	5,826	76,955	153,595	154,758	76.3	75.7	47,652	15,864	21,882	22,043
Monon	Aug.	541	1,283	27	1,392	1,544	249	256	30	291	259	76	97	628	1,359	1,319	97.7	85.4	33	123	—163	76
	8 mos.	541	11,402	222	12,362	13,308	1,886	1,916	175	2,221	2,397	609	830	5,142	10,899	11,341	88.2	85.2	1,463	938	—211	708
Monongahela	Aug.	177	658	....	662	529	75	73	12	56	61	11	2	138	310	299	46.8	56.6	352	36	243	130
	8 mos.	177	4,636	....	4,657	3,420	582	537	98	420	447	88	8	1,073	2,234	2,511	48.0	73.4	2,423	265	1,710	345
New York Central	Aug.	10,368	41,106	5,673	54,985	51,387	6,152	5,730	1,026	11,250	11,100	2,421	1,051	25,920	47,263	45,940	86.0	89.4	7,721	5,721	—533	—1,990
	8 mos.	10,368	345,431	45,869	457,075	464,183	49,546	49,982	8,644	90,000	86,800	19,546	8,469	213,362	384,853	387,877	84.2	83.6	72,222	45,624	10,440	17,553
Pittsburgh & Lake Erie	Aug.	220	2,419	35	2,534	1,085	426	338	56	855	525	333	62	1,020	2,584	1,852	102.0	170.7	—51	240	582	113
	8 mos.	220	23,066	276	24,427	23,165	3,363	3,019	445	7,260	7,025	2,661	505	8,831	21,634	21,107	88.6	91.1	2,792	4,563	7,018	6,040
New York, Chic. & St. Louis	Aug.	2,170	11,787	138	12,469	10,570	1,309	1,246	129	1,915	1,850	472	377	4,901	9,014	8,356	72.3	79.1	3,455	1,510	1,236	756
	8 mos.	2,170	96,417	1,027	101,297	101,374	10,923	11,235	1,289	16,494	16,778	3,767	2,893	39,115	73,372	73,000	72.4	72.0	27,925	13,340	9,766	11,335
New York, New Haven & Hartford	Aug.	1,742	5,640	3,817	10,920	10,883	1,4 4	1,570	267	1,930	1,600	453	233	5,637	10,086	9,947	92.4	91.4	834	1,064	—1,673	—1,531
	8 mos.	1,757	48,757	29,569	90,720	97,701	11,247	11,746	2,113	15,268	14,434	3,750	1,944	45,421	81,073	83,009	89.4	85.0	9,648	8,146	—10,405	—4,669
New York Connecting	Aug.	21	232	....	265	298	53	79	25	12	14	....	....	64	133	189	50.0	63.4	132	103	9	—2
	8 mos.	21	1,996	....	2,256	2,694	595	503	203	143	111	....	....	722	1,491	1,354	66.1	50.3	765	744	—190	445
New York, Sus. & Western	Aug.	99	314	12	350	316	41	42	6	48	55	11	9	150	280	301	80.1	95.2	70	33	—6	—62
	8 mos.	99	2,461	109	2,703	2,684	335	331	51	407	429	84	72	1,226	2,298	2,444	85.0	91.1	406	269	—196	—320

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF AUGUST AND EIGHT MONTHS OF CALENDAR YEAR 1960

Name of Road		Average mileage operated during period	Operating Revenues				Operating Expenses										Operating ratio		Net from railway operation	Railway tax accruals	Net Railway operating income	
							Maint. Way and Structures			Maint. Equipment												
			Freight	Pass.	Total (inc. misc.) 1960	Total (inc. misc.) 1959	Total 1960	Total 1959	Deprec and Retirements	Total 1960	Total 1959	Deprec and Retirements	Traffic	Transportation	Total 1960	Total 1959	1960	1959			1960	1959
Norfolk & Western	Aug.	2,743	19,416	233	20,541	19,230	2,354	1,941	469	3,333	3,281	1,468	446	5,434	12,422	11,548	60.5	60.1	8,119	3,605	5,860	5,467
	8 mos.	2,743	156,529	1,703	165,218	166,505	17,798	18,573	3,362	26,742	29,284	11,646	3,265	44,171	98,112	102,178	59.4	61.4	67,106	34,942	43,154	41,326
Norfolk Southern	Aug.	592	804	....	814	837	181	178	15	129	136	40	50	267	691	696	84.8	83.2	124	56	36	57
	8 mos.	592	6,071	....	6,166	6,403	1,359	1,517	114	1,058	1,050	321	395	2,041	5,380	5,591	87.3	87.3	786	471	242	170
Northern Pacific	Aug.	6,806	14,812	639	16,513	17,038	2,937	2,813	309	2,865	2,669	824	402	6,375	13,559	12,997	82.1	76.3	2,954	2,217	973	1,451
	8 mos.	6,823	103,986	4,270	116,838	122,060	19,077	19,156	2,579	22,490	21,829	6,504	3,397	47,739	100,043	99,575	85.6	81.6	16,795	13,211	5,510	8,952
Northwestern Pacific	Aug.	328	1,073	1	1,084	1,302	175	206	18	88	79	3	7	338	632	693	58.3	53.2	452	82	145	154
	8 mos.	328	7,976	4	8,027	9,444	1,576	1,697	150	610	675	21	61	2,452	4,910	5,377	61.2	56.9	3,116	937	319	911
Pacific Electric	Aug.	348	1,005	....	1,143	1,050	187	181	23	44	66	4	23	574	929	987	81.2	94.0	214	142	—68	—203
	8 mos.	352	7,980	....	9,067	9,567	1,463	1,481	188	314	453	29	176	4,214	6,983	7,498	77.0	78.4	2,084	1,135	—424	—50
Pennsylvania	Aug.	9,873	52,884	8,560	69,859	66,219	7,122	6,654	1,474	12,931	13,602	3,027	1,230	32,865	58,517	56,603	83.8	85.5	11,341	6,074	—1,007	—1,241
	8 mos.	9,887	459,641	70,257	601,622	600,685	60,907	59,264	11,765	113,783	120,800	23,640	9,829	272,145	491,487	496,268	81.7	82.6	110,135	48,322	12,298	19,806
Penn.-Reading S. S. Lines	Aug.	338	501	171	698	726	169	217	25	108	143	25	6	500	860	944	123.1	130.0	—161	74	—401	—473
	8 mos.	338	4,343	714	5,235	5,432	1,389	1,855	205	988	1,052	206	58	3,879	6,782	7,333	129.5	135.0	—1,547	595	—3,523	—3,775
Piedmont & Northern	Aug.	126	459	....	469	430	45	40	8	35	36	10	33	97	252	232	53.8	53.9	217	107	60	49
	8 mos.	126	3,723	....	3,813	3,748	375	338	43	301	276	79	259	751	2,003	1,853	52.5	49.4	1,810	882	497	537
Pittsburgh & West Virginia	Aug.	132	616	....	620	363	143	133	26	147	152	45	61	209	617	566	99.6	155.9	2	—44	30	—69
	8 mos.	132	5,611	....	5,663	5,680	1,185	1,157	207	1,197	1,284	359	575	1,654	5,081	5,303	89.7	93.4	582	140	389	321
Reading	Aug.	1,303	7,252	443	8,306	7,570	1,060	1,110	194	1,722	1,553	481	182	3,871	7,306	6,938	88.0	91.7	1,000	708	39	386
	8 mos.	1,303	62,095	3,809	70,736	71,735	8,665	9,047	1,543	13,669	13,916	3,857	1,535	31,438	59,096	60,343	83.5	84.1	11,641	4,596	4,316	5,096
Richmond, Fred. & Potomac	Aug.	118	1,105	440	1,852	1,951	167	155	28	316	291	66	26	680	1,335	1,280	72.1	65.6	517	348	99	202
	8 mos.	118	10,300	3,631	16,628	16,194	1,361	1,198	235	2,362	2,309	514	226	5,508	10,633	10,722	64.0	66.2	5,995	3,535	1,682	1,591
Rutland	Aug.	391	331	....	354	352	76	79	9	55	54	18	28	153	340	335	96.2	95.2	14	32	—17	—12
	8 mos.	391	2,617	....	2,823	3,087	607	621	71	476	478	145	223	1,224	2,752	2,824	97.5	91.5	72	250	—197	—9
St. Louis-San Francisco	Aug.	4,546	8,338	244	9,367	9,894	1,319	1,603	117	1,555	1,776	534	351	3,954	7,791	8,408	83.2	85.0	1,576	763	591	791
	8 mos.	4,550	71,543	1,512	79,399	80,375	12,277	12,547	1,472	13,111	13,682	4,779	2,862	31,762	64,917	65,207	81.8	81.1	14,482	5,648	7,089	7,721
St. Louis-San Francisco & Texas	Aug.	143	394	....	414	465	29	33	4	20	31	1	22	156	240	251	57.9	53.9	174	56	38	73
	8 mos.	143	3,367	2	3,502	3,529	255	212	33	212	222	10	178	1,186	1,935	1,940	55.2	55.0	1,567	447	570	480
St. Louis Southwestern Lines	Aug.	1,554	5,055	....	5,123	5,575	574	585	86	679	705	212	185	1,769	3,398	3,356	66.3	60.2	1,725	745	870	986
	8 mos.	1,554	43,605	1	44,142	44,091	4,620	4,737	661	5,593	5,299	1,723	1,459	14,231	27,366	27,611	62.0	62.6	16,775	7,519	7,573	7,064
Savannah & Atlanta	Aug.	144	388	....	403	355	77	37	2	68	61	20	17	122	296	256	73.5	72.1	107	47	42	47
	8 mos.	144	2,829	....	2,948	2,729	440	418	15	550	510	155	133	943	2,168	2,068	73.6	75.8	779	331	313	324
Seaboard Air Line	Aug.	4,145	9,828	1,293	12,070	12,762	1,647	1,734	221	2,451	2,267	769	489	4,827	10,115	9,842	83.8	77.1	1,955	821	929	1,554
	8 mos.	4,146	89,023	10,344	107,862	107,398	13,884	13,669	1,778	20,521	19,590	5,904	3,817	39,559	83,397	81,270	77.3	75.7	24,465	10,735	11,313	12,865
Southern Railway	Aug.	6,267	18,640	1,159	21,366	22,091	2,331	2,352	358	3,652	3,739	1,033	519	7,269	15,011	15,038	70.3	68.1	6,355	2,765	3,251	3,289
	8 mos.	6,267	152,343	7,792	173,290	178,925	21,730	23,040	2,745	30,625	30,369	8,110	4,100	57,006	122,943	124,087	70.9	69.4	50,347	22,150	22,713	25,267
Alabama Great Southern	Aug.	328	950	65	1,154	1,237	192	163	36	280	285	83	42	484	1,104	1,068	95.7	86.4	50	97	—88	68
	8 mos.	328	9,020	360	10,508	11,190	2,058	1,947	295	2,467	2,602	655	334	3,972	9,639	9,659	91.7	86.3	869	699	—342	487
Cinn., N. O. & Tex. Pac.	Aug.	337	2,575	128	2,908	3,245	494	575	72	697	693	264	85	891	2,358	2,394	81.1	73.8	550	301	472	596
	8 mos.	337	22,317	731	24,780	27,078	4,551	4,612	565	5,927	5,716	1,961	671	7,128	19,746	19,610	79.7	72.4	5,034	2,375	3,825	5,051
Georgia Southern & Florida	Aug.	397	628	53	759	861	134	100	14	67	158	10	22	268	549	626	72.3	72.7	210	40	29	24
	8 mos.	397	4,920	300	5,864	6,876	1,300	985	92	592	717	83	179	2,099	4,610	4,537	78.6	66.0	1,254	349	—337	472
New Orleans & Northeastern	Aug.	203	749	47	864	940	194	172	30	223	196	101	28	250	771	716	89.2	76.2	93	89	41	102
	8 mos.	203	5,986	270	6,818	7,749	1,589	1,588	205	1,714	1,611	732	219	2,039	6,150	6,093	90.2	78.6	668	689	338	810
Southern Pacific	Aug.	7,959	42,333	2,922	47,793	45,591	5,364	5,553	683	10,503	10,735	2,578	740	18,367	37,266	37,243	78.0	81.7	10,527	5,443	4,360	3,065
	8 mos.	8,018	327,932	18,238	366,018	371,680	41,943	42,844	5,110	81,809	880,661	20,583	6,104	138,158	284,834	287,348	77.8	77.3	81,184	41,503	34,663	33,689
Texas & New Orleans	Aug.	4,091	9,677	380	10,643	11,722	1,752	1,807	170	1,697	1,755	203	260	4,244	8,567	8,858	80.5	75.6	2,075	594	196	646
	8 mos.	4,092	80,977	2,470	88,379	94,854	14,133	15,397	1,231	13,379	13,483	1,616	2,006	32,969	67,300	70,451	76.1	74.3	21,079	8,136	3,220	5,433
Spokane International	Aug.	150	281	....	289	292	53	44	4	20	23	10	4	72	159	159	55.2	54.4	129	50	40	66
	8 mos.	150	2,216	....	2,284	2,420	427	363	29	217	206	79	34	571	1,327	1,299	58.1	53.7	957	471	258	444
Spokane, Portland & Seattle	Aug.	936	2,843	109	3,139	3,167	479	400	67	529	497	129	32	1,126	2,299	2,150	73.2	67.9	840	441	264	326
	8 mos.	936	19,711	712	21,898	22,898	3,481	3,593	475	3,902	3,784	1,031	284	8,383	17,042	16,790	77.8	73.3	4,857	2,171	1,827	2,853
Tennessee Central	Aug.	284	308	1	344	348	54	43	5	56	50	21	15	124	272	254	79.0	72.9	72	26	8	25
	8 mos.	284	2,520	2	2,758	2,752	378	343	43	439	411	171	120	984	2,110	2,062	76.5	74.9	648	205	96	184
Texas & Pacific	Aug.	1,828	4,568	436	5,639	5,855	632	746	93	1,058	1,069	285	234	2,556	4,883	4,971	86.6	84.9	756	169	208	215
	8 mos.	1,828	41,125	2,697	48,707	50,049	5,357	6,725	807	8,527	8,492	2,246	1,862	20,275	38,981	40,531	80.0	81.0	9,726	2,963	2,395	2,514
Texas Mexican	Aug.	161	273	....	299	297	45	59	8	38	31	11	14	98	217	221	72.6	74.4	82	37	14	14
	8 mos.	161	2,085	....	2,310	2,522	370	471	49	274	268	91	100	675	1,607	1,765	69.6	70.0	703	324	142	145
Toledo, Peoria & Western	Aug.	239	589	....	613	694	71	86	7	54	49	13	50	177	392	396	64.0	57.0	221	87	48	92
	8 mos.	239	4,788	....	4,982	5,153	593	619	55	402	404	107	412	1,393	3,126	3,121	62.8	60.6	1,856	809	493	606
Union Pacific	Aug.	9,746	38,053	3,225	44,449	43,411	4,483	5,123	518	7,632	7,754	2,472	1,021	15,591	31,087	32,369	69.9	74.6	13,362	7,331	3,590	2,474
	8 mos.	9,746	282,404	19,453	325,816	342,090	36,255	41,703	5,282	61,340	65,258	19,218	9,601	116,316	241,557	255,811	74.1	74.8	84,259	50,949	18,703	23,005
Wabash	Aug.	2,413	7,949	462	9,352	9,413	862	983	126	1,221	1,333	419	314	4,488	7,349	7,562	78.3	80.3	2,033	674	556	405
	8 mos.	2,413	63,862	3,270	74,609	80,408	7,450	9,703	932	10,803	11,668	3,745	2,645	34,824	59,412	64,983	79.6	80.8	15,197	5,522	3,288	3,894
Ann Arbor	Aug.	294	687	....	720	775	70	90	7	167	162	44	21	313	597	681	82.9	87.9	123	53	50	5
	8 mos.	294	5,450	....	5,558	5,924	530	720	45	1,245	1,282	356	232	2,694	4,884	5,383	87.9	90.9	674	440	62	—85
Western Maryland	Aug.	841	3,859	....	4,026	2,564	530	458	55	809	750	301	128	1,327	3,004	2,616	74.6	102.0	1,021	545	740	264
	8 mos.	842	30,485	....	31,621	31,747	4,744	4,342	497	6,746	6,444	2,460	1,004	10,573	24,784	23,901	78.4	75.3	6,837	3,901	5,317	6,244
Western Pacific	Aug.	1,188	4,193	295	4,624	4,249	650	767	85	656	689	194	250	1,661	3,554	3,638	76.9	85.6	1,070	414	498	387
	8 mos.	1,188	32,800	1,692	35,355	35,619	4,685	4,456	647	5,555	5,543	1,721	2,035	13,160	28,086	27,194	79.4	76.3	7,269	3,352	3,399	4,267
Wisconsin Central	Aug.	1,031	2,686	53	2,904	2,654	293	386	43	438	439	110	107	1,258	2,266	2,208	78.0	83.2	638	200	138	7
	8 mos.	1,031	20,636	205	22,339	22,174	2,518	3,077	363	3,487	3,726	876	845	9,566	17,714	18,296	79.3	82.5	4,625	1,589	1,128	824

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EXCAVATORS-CRANES to 2 yds.-60 tons
LOCOMOTIVE CRANES to 130 tons

DERRICKS-HOISTS to 800 tons
REVOLVER CRANES to 400 tons

CROSBY-LAUGHLIN DIVISION
Forged fittings for wire rope-chain

Railroading After Hours with Jim Lyne

BIG OR LITTLE TRAINS?—I had a talk recently with the manager of a relatively short ore-hauling railroad (not in the U.S.) who runs trains no bigger than can be pulled by a single 1,500-hp unit. He was asked why he didn't couple three units together and save himself some expense. His answer was that this wouldn't save anything.

He said, as far as locomotive expense is concerned, the units do not cost any more operating singly than coupled. The only saving would come in crew expense—but his crew expense is reasonable (2 men in the engine and one trainman—the three of them earning, all together, only about $250 a month). He figures, by running short trains he saves more in car maintenance by not putting so much strain on the draft gear, than the slight extra expense he incurs for crews.

He insisted that the extra-long train is not inherently economical, but has become so in actuality only where there are coercive wage and crew-size rules.

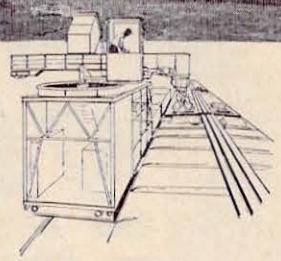
TRAVEL COMPLAINTS—I see, in our last week's issue, where Commissioner Walrath doesn't believe railroads are sufficiently attentive to coach passengers, while he feels they "pamper" the first-class passengers. I have a long and interesting letter from an influential lady, who travels with her husband over 40,000 miles a year, and who is just as unhappy over her experience as a first-class passenger as Commissioner Walrath is over what he believes coach customers are getting.

The lady tells me she boarded a night train with the assurance that there was a diner and club car in the consist—but, from all she could find out, nobody around the terminal but the train crew knew these cars had been pulled off. My correspondent is reasonable. She doesn't object if a railroad discontinues first class service where it doesn't pay—but, she contends, so long as such trains are operated at all, the service should be acceptable.

My correspondent doesn't criticize all railroads—some of them, she reports, are doing a good job; and, by picking and choosing among them, she manages to get in a lot of train travel.

MORSE CODE DISPATCHERS—I was talking to the Train Dispatchers' Bill Coutts the other day about train dispatching by telegraph and to what extent it may still prevail. It would be interesting to know where the busiest piece of track is that is still under this type of control. Anybody have the information, or clues thereto?

THE DIFFERENCE BETWEEN "SLOW" AND "GO" IN BUNKER ICING OPERATIONS



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The self-propelled Conveyco Rail Mounted Icer operates on an assigned standard gauge track ...to ice cars of trains pulled in on adjacent tracks on either side. Icing is accomplished without uncoupling cars or shuttling to ice docks... and it's all done while other service work on trains is being done. Savings in time are tremendous.

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'Crewless' Train Is Only Six Months Off

By ROBERT W. McKNIGHT
Signaling & Communications Editor

The New York City Transit Authority automatic subway train is expected to be in revenue service in about 5½ to 6 months, according to Charles A. Patterson, NYCTA chairman.

The three-car train will operate in shuttle service between Times Square and Grand Central Terminal (RA, Oct. 17, p. 26). Although the train can operate with no crew, Mr. Patterson said plans call for staffing it with a conductor or an attendant.

However, Michael J. Quill, president of the Transport Workers Union, says his organization will oppose operation of the new train. The TWU has contracts covering 3,100 motormen and about 5,000 conductors in the city's transit system.

Following the recent automatic subway train demonstration run, TWU officers, headed by Mr. Quill, sent a telegram to Mr. Patterson which said, in part: "We are putting you on notice now that TWU will fight the destruction of mass transportation in NYC as a result of unbridled automation. In the autumn of 1961, when we open negotiations for a new contract for our members, we will demand, in addition to a wage increase and other improvements, ironclad guarantees on job security and protection against your various schemes for further automation on the transit lines. As far as TWU is concerned, gadget or no gadget, the motormen and conductors will stay on the trains."

The subway train has been operating for several months on a 2,700-ft section of the BMT's Sea Beach line in Brooklyn between the New Utrecht Avenue and 18th Avenue stations. The length and gradient of the line closely approximate those of the Times Square-Grand Central shuttle.

The train has external automatic control, with pre-programming equipment at the 18th Avenue station. The completely automatic operation is controlled by 100-cycle alternating current superimposed on the rails at varying code rates.

At the public demonstration run last month, the train was boarded via a gangplank. The train was on a center track at 18th Avenue station. About one minute after the gangplank was removed, the train doors closed.

The train accelerated to 29 mph. As it neared New Utrecht Avenue station ("Times Square") speed dropped to 5 mph. The train then came to a stop within 5 ft of a wayside marker designating the station stop. The trip took about 90 seconds. The doors automatically opened and remained open for one minute. Headlights were extinguished and tail lights were lighted at the "Times Square" end of the train. At the other ("Grand Central") end, the tail lights were turned off and headlights were turned on. "Grand Central" destination signs were lighted and "Times Square" signs were turned off. After a one-minute interval, the doors closed and the train returned to 18th Avenue ("Grand Central").

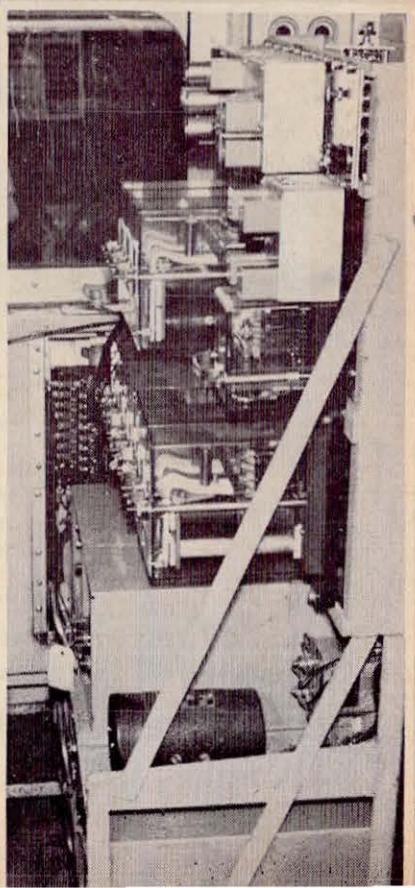
Programming for the train's movement—when it is to depart from either station—is set by an automatic dispatching unit at 18th Avenue station. The unit has a time clock and a 35-mm film with holes in it. A light source is directed toward the film. A photoelectric cell responds to the light when it passes through one of the holes in the film. Response to the light sets up controls for train door operation, thereby controlling train departures.

The control equipment was built and installed by the General Railway Signal Company, the Union Switch & Signal Division of Westinghouse Air Brake Company, and the Air Brake Division of WABCo. According to Mr. Patterson, the two companies spent between $250,000 and $300,000 on the project, while the NYCTA spent between $20,000 and $30,000.

Both signal companies will re-package the control equipment into a more compact design for installation in the train when it goes into the TS-GCT shuttle service.

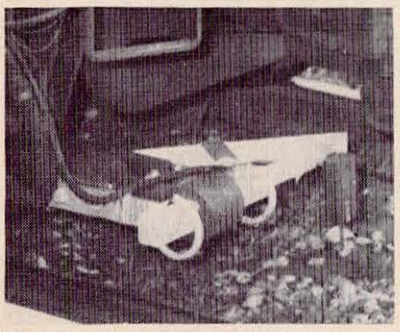
Automatic subway train's

General Railway



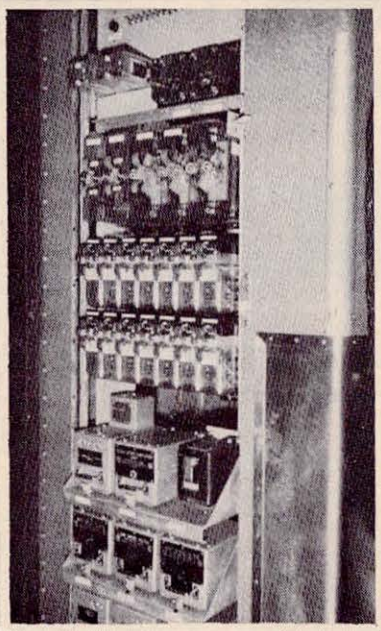
schedule and station stops are controlled by automatic dispatcher (inset) using prepunched 35-mm film.

Signal Equipment

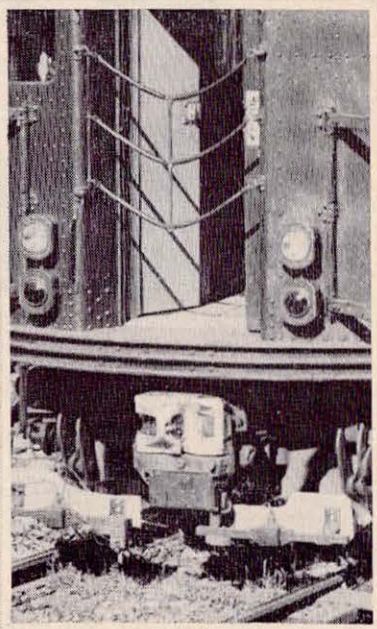


Receiver coils on the head end of a lead car are encapsulated in an epoxy resin.

Union Switch & Signal Equipment

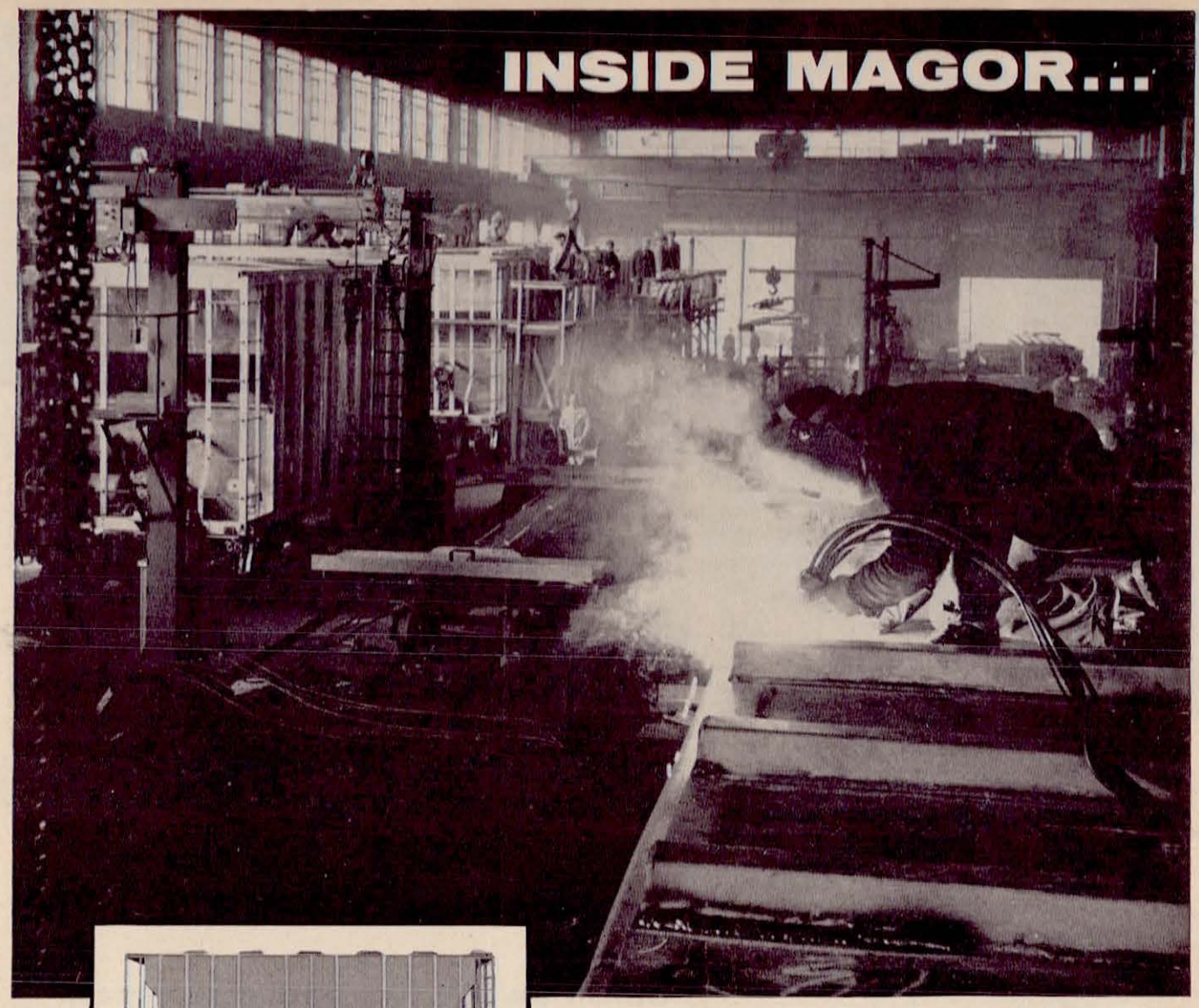


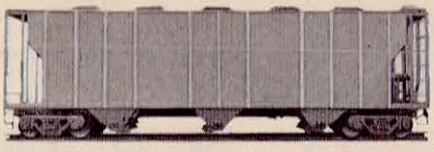
Control equipment is in the rear motorman's compartment of each leading car.



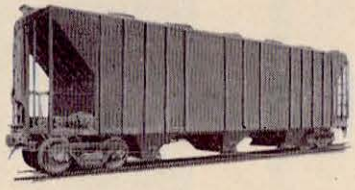
Receivers (below coupler) pick up 75 code in wire loop for door control at stations.

Control equipment will be repackaged into more compact units on the shuttle train.





Aluminum Covered Hopper Car
3818 cubic foot 100 ton capacity
Weight 50,100 pounds



Low Alloy—High Tensile Steel Covered Hopper Car
3930 cubic foot 94 ton capacity
Weight 63,700 pounds

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Central Western	128,689	131,281	136,518
Southwestern	52,926	56,507	54,724
Total Western Districts	270,474	257,516	285,013
Total All Roads	620,712	587,776	674,991
Commodities:			
Grain and grain products	68,383	63,599	66,882
Livestock	10,779	11,154	11,361
Coal	104,132	108,979	117,159
Coke	5,634	3,119	7,870
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Totals	253,171,243	248,184,149	+2.0

making proceeding instituted to declare such a policy.

4. That policy-making proceedings be initiated by the commission en banc, either on its own motion, with or without petition, or on the recommendation of the chairman, the secretary, the executive commissioner, or any three commissioners. The officers of the commission and the directors of the bureaus should be directed to submit proposals for the initiation of such proceedings."

With the release of the reports on Nov. 9, the ICC issued a statement saying the advisory committee's recommendations "already are under active consideration" with a view to adopting those "that promise to improve organization and functioning of the Commission." As to the BA&H recommendations, the Commission said these will be given "similar consideration."

Editors Afield

SAO PAULO, BRAZIL

Inter-terminal fast, intra-terminal slow—this seems to be a travel rule of general application, almost everywhere. You go from New York to Brasilia in one jet hop in 8-½ hours and then unload and put in 1-½ hours, getting through immigration and customs. If you go to New York from Sao Paulo, the bus for the airport leaves the center of town 3-½ hours before the plane is scheduled to depart. You put in about 25% of your travel time on the ground.

It's just like the mail service in the U.S.—they take it like lightning through the air and then deliver it when they feel like it (once a day now, compared to three times a day back in the twenties).

The Pan-American Railway Congress I've been attending down here is the fourth such function I've sat in on—and some of the delegates I've seen here have been at the other three, too. Gradually, a few Americans with railroad connections, like myself, are getting well acquainted with our opposite numbers in several of the Latin-American countries.

It seems to me that international friendship and understanding is just as much advanced when railroaders or doctors or engineers or labor union officers know their opposite numbers in other countries —as when chiefs of state become similarly acquainted.

Railroads are big and important in Brazil. I was expecting to see a lot of 4-wheel cars with vacuum brakes, or no continuous brakes at all. I was happily fooled. I have seen no such jerk-water freight cars here at all, although there are doubtless some of them back in the hinterland.

All that I have seen have standard trucks (many of them of the arch-bar variety, to be sure); and pneumatic brakes and automatic couplers. Freight cars (except tank cars) are smaller than ours on the average, but passenger cars equal ours in every respect. I even suspect Brazil's proportion of passenger cars that are post-war construction may exceed our own ratio.

There are some Budd-designed suburban cars on the Santos-Jundiai line which have the same exterior dimensions as the cars on the PRR's Congressional.

When it comes to suburban traffic, there's nothing in the U.S. to compare with that being handled at Pedro II station in Rio or Luz station in Sao Paulo.

Incline planes still operate on the Santos-Jundiai line. There are five inclines where they let two or three cars down on one track and pull two or three up on the other track, by cable. All the power needed is that to make up for the weight and friction difference between the nearly-balanced loads.

The cars are protected on the down side by a dummy-style steam locomotive called a "brake"—and it is a brake, too, because it can grab onto the rails if a cable should break. At the downside of these engines, there is a row of seats for spectators. Frisco's Clark Hungerford was one of the riders and he confessed:

"It's the biggest thrill I've had around a railroad since I was 11 years old and my dad let me ride the seat box of an engine between stations."

Bob Coutts is a 100% railroader —I mean President Coutts of the Train Dispatchers, one of the delegates with whom I have become well acquainted. I found that he, like myself, is an old Rock Islander. Moreover, he likes to "railroad" orally (as who doesn't, who has his heart in this business). And a fellow that has worked all over his railroad, as Bob has done, has got plenty to contribute to railroading of the anecdotal variety.

VP Jim Newell of the PRR is a photographer, and how! He has been taking colored movies for around 30 years and on this trip he reeled off 4,000 ft. If he hasn't got the best railroad travelogue of Argentina and Brazil ever filmed, I'll miss my guess. And he is a conscientious photographer, too—not casual about it at all, as so many amateurs are. He has been constantly looking for the interesting shots, no matter how hard they have been to get.

We Americans are inadequate linguists. It isn't that we can't learn foreign languages, either. Fellows like Loyd Kiernan (retired vp of the B&M), who have been in Brazil for some time, have got an adequate command of the local language. The same is true of U.S. suppliers stationed down here.

But find an American who has never lived in a Latin country who knows any Spanish or Portuguese —and you've got your hands on a rare bird.

On the other hand, you hardly ever run into a Latin with any pretentions to education who doesn't have, at least, a reading knowledge of some language other than his own—and often it is English.

Benjamin Mendez, general manager of the National of Mexico, apologizes for his English, but he needn't, for he speaks it fluently, and so do many of his colleagues on the Mexican railroads (a far larger number, I am sure, than U.S. railroaders who can speak Spanish). Practically all of the important officers of the Brazilian railways that I have run into have some command of English. Some of them use it with great skill.

One great service U.S. railroads that can afford it could do to further Latin-American understanding would be to reward selected officers who will master Spanish in the meantime, with the opportunity to attend the next Pan-American Railway Congress, scheduled for Mexico in 1963.

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a RAILWAY AGE time-saver page

Needed: 'Total Transport' Research

► **The Story at a Glance: A "serious indictment" of American transportation in the mid-20th century has emerged from a "summit" conference of transportation leaders sponsored by the National Academy of Sciences. A major criticism: "There seems to be no clear-cut responsibilty for encouraging the development of a transport complex best to serve the national interest." Recommended remedy: "Total transport" research sponsored jointly by the government and all modes of transportation.**

Findings of the conference are contained in a report that is being made public this week (Publication 840, Printing and Publishing Office, National Academy of Sciences—National Research Council, 2101 Constitution Ave., N. W., Washington 25, D.C. Price $1.00).

During the next two decades, demands for freight transport will rise by an estimated one trillion ton-miles over present levels. Is the transportation industry gearing itself for the job ahead?

At Woods Hole, Mass., 150 leaders in the transportation field met to ponder the question. Their answer: "No."

In a just-published report emanating from the August 1960 sessions, "fresh approaches" are recommended—with particular emphasis on point five:

1. "Government policy needs to be aimed at providing an environment that can nurture a healthy, dynamic system, responsive to changing conditions and emerging technology."

2. "The transport industries need to be in a position to take advantage of scientific discovery and new methods, and to be apprised of the effects of new conditions that directly or indirectly affect them."

3. "Problems of urban mobility need to be viewed in relation to community planning and development."

4. "The chasm between the transport operators and the agencies for research and education needs to be bridged."

5. "A research program which can add to understanding and lead to the improvement of the composite transport function needs to be conceived, organized, programmed and financially supported."

The conference emphasized the need for using the "system" concept in transport research:

"We conceive the total transportation system of the nation to be the aggregate of plant, facilities, services, activities and institutional arrangements and policies, by means of which the movement of people and goods is accomplished.

"This concept of a transportation system does not imply central authority over all transport matters; nor does it imply that all transportation effort is to be integrated. On the contrary, the transportation system . . . consists of a number of subsystems or parts which have some common objectives and functions, but which, it may be found, operate effectively with varying degrees of independence. Moreover, the transportation system functions within a setting of more inclusive systems (among which are the economic system, the legal system, the social system, and the political system), each of which may impose restraints and conditions.

"Analytical studies of the transportation system should have as their overriding objective the furtherance of our abilities to identify, with greater assurance, modifications or adjustments in the system that will aid the economic, social, and strategic objectives of the commonwealth. . . .

"Systems analysis techniques and computer applications offer opportunities for the handling of many hitherto unmanageable transportation problems. The usefulness of conceptual models in contributing to the solution of specific transport-type problems has also been demonstrated. But more must be learned about the effective application of these techniques in a field so organizationally diverse and institutionally compartmentalized as transportation.

"Our goal should be substitution of efficient analysis and experimentation for random experience so that the insights and guidance thus provided may be made available to all participants in the transport complex. This, we believe, offers the most promising long-range approach to improved decision-making and operation in transportation."

The required analytical program, the conference found, demands the "full support and active participation of both government and industry, representing all major modes of transport and all major government functions. It must be supported also by adequate and accurate data now residing in many separate agencies. . . .

"To set in motion the kinds of effort needed to attack the problems of transport on the scale here implied requires detailed consideration of ways and means, and delineation of scope and responsibility. We suggest that an interim group be established to formulate an acceptable program of effort."

The next steps, concluded the report, should include: "(a) careful detailing of a subsequent program of research and study, (b) solicitation of advice from appropriate officials in government and executives in industry, (c) solicitation of advice concerning specifications for any subsequent agency that may be recommended, and (d) development and documentation of expected program costs."

Attending the conference were high-ranking representatives from all modes of transportation, their trade associations, the federal and local governments, research foundations, universities, and industry in general. The conference lasted three weeks.

Research Called Key to Profits

Not only railroads but the whole common carrier industry is in pursuit of disappearing profits. What can be done about it? More than is being done, Professor Ernest W. Williams, Jr. of Columbia University told New York's Transportation Research Forum.

Railroads have sought for 30 years to get external help, Professor Williams said, but "I am inclined to think dividends will remain small from that source." Internal help, he said, has to be the answer.

Suggesting that common carriers need a better understanding of "profit consciousness" in the sense the term is ordinarily understood outside of the transportation industry, Professor Williams said railroads need to know more about their efficiency of service and their prices in a competitive market.

Railroads need quality control, he said, a reliable measurement of service to the customer rather than efficiency in moving tonnage. They need to understand their load factor, not just in terms of train crews but in terms of their capital investment in freight cars, permanent way, etc. The 18-hour freight car week should be as disturbing a statistic as the 20-hour week of the commuter car, Professor Williams said.

"A program of research on a vastly expanded basis seems to me to be essential," Professor Williams concluded, adding that it would have to be accomplished by "a willingness to carry conclusions . . . into action."

ICC REVAMPING RECOMMENDED *(Continued from page 10)*

should be abandoned in favor of electing the chairman for a three-year term and making him eligible for reelection.

"The chairman should be charged with total management responsibility with the power to delegate as appropriate," the report adds.

It proceeds to recommend also that the Commission elect one of its members vice-chairman. The vice-chairman, among other duties delegated by the chairman, "should make decisions on acceptance of appeals from division decisions under general rules and orders limiting such appeals to issues of general transportation importance."

For the Commission's internal administration, BA&H recommends an Office of Administrator, under the chairman, and an Office of Field Operations under the administrator. Presumably, this arrangement would replace the present Office of the Managing Director, which BA&H thinks, has not been permitted to live up to its billing. The report says:

"The intention of those who originally recommended this office was the consolidation of all management functions under the Commission in the position of the managing director. However, these functions have been subject to erosion over the last several years. Today, this office is largely focused on housekeeping services, budget and personnel, plus a limited and ill-defined responsibility for efficient use of human resources."

As to organization of the Commission itself, BA&H recommends three primary divisions instead of four. The three would be A—Operating; B—Rates and Practices; C—Finance and Carrier Reorganizations. This would result in abolition of the present Division 3—Rates, Safety and Service, but the report says "the occasional safety and service case should be assigned by the vice-chairman on the basis of workload."

The report's plan for leaving the Commission free to deal with major cases contemplates legislation permitting delegation of substantial decisional and appellate authority to boards of employees. Pending enactment of such legislation, the report recommends creation on a temporary basis of a commission Division for General Appellate Matters.

As to commission bureaus, the report recommends that the number be reduced from 10 to 4. The four would be: Applications and Inquiries; Proceedings; Safety and Compliance; Enforcement.

Meanwhile, however, the new bureaus would have several sections, and the sections would have many branches. And some other functions of the present divisions would be continued in what the report calls a "staff support" set-up. That would include an Office of Public Information and an Office of Transportation Policy and Analysis.

The latter would have three sections —Central References and Statistics, Transport Industries Analysis, and Economic Analysis and Proceedings Support. It would thus take over, and perhaps expand, some of the work now being done in the Bureau of Transport Economics and Statistics and Bureau of Accounts.

The proposed new Bureau of Safety and Compliance would have a Section of Explosives and Other Dangerous Articles. This would be designed to end present commission practice which, the report says, treats this subject "as an offshoot of attention to problems of regulation of railroads." The change was recommended because "the responsibility for movement of dangerous articles is becoming of greater significance as the economy and defense effort make greater use of fissionable materials and other dangerous articles."

Other recommendations of the report include those comprising a plan for strengthening the commission's field offices and coordinating their activities. Here is a proposal that each regional office include a Section of Railroads under a district supervisor of railroads. "These men," the report adds, "should develop across-the-board regulatory programs in the railroad field as the present district directors of motor carriers are presently doing in the motor carrier areas."

Organization changes recommended by the commission's Special Advisory Committee call for election by the commission of one of its members as "executive commissioner" who would have all the administrative responsibilities and duties, both managerial and regulatory. This would permit other commissioners to devote their activities "to policy making and ad hoc adjudication which pertain to legislative or judicial functions."

Under the executive commissioner would be the Office of Secretary, which would get new responsibilities, including research and policy functions in the fields of economics and costs; the Office of General Counsel; and the Office of Administrator. Under the latter would come an Office of Management and an Office of Regulation.

The Office of Management would deal with housekeeping and other internal matters, such as personnel, services and supplies, and budget.

The proposed new Office of Regulation would have under it these five regulatory bureaus: Operations; Traffic; Accounts and Statistics; Finance; Compliance. These bureaus would have regulatory functions, and adjudicatory functions of the present 10 bureaus and their hearing examiners would be reassigned to a new Office of Proceedings.

To that new office would be transferred also the "decisional" functions of the secretary. All prehearing activities would also be centered in the new office, and its other principal functions would be: (1) to eliminate from the hearing process, by assignment through employee boards or through summary disposition, all non-adversary proceedings and all proceedings where no substantial issue of fact or law is presented, and (2) to develop and to implement adequate pretrial procedures designed to simplify and expedite hearing proceedings and to insure that a complete record, free of all extraneous and immaterial matter will be made."

As to organization of the commission itself, the committee recommends that the chairman be its presiding officer with the duties of controlling its calendar and assigning members to divisions. Three standing divisions created on a functional basis are recommended — Operations, Traffic, and Finance-Accounts. They would decide initially proceedings of general transportation importance, finally dispose of petitions for reconsideration of decisions of individual commissioners and employee boards, and see that cases are assigned to individual commissioners for preparation of final reports.

In addition to its recommendation that the entire commission consider only cases of "general transportation importance," the committee proposes that the commission adopt this basic policy:

1. That major issues of general transportation policy should be settled at the earliest time consistent with thorough consideration and that the policy declared govern all its divisions, individual commissioners, officers and employees thereafter.

2. That as far as possible such policies be determined objectively in general ex parte rule-making proceedings in which all interested members of the general public are afforded the opportunity to be heard.

3. That whenever such an issue is found to be presented in one or more pending ad hoc adjudicatory proceedings, such proceedings be immediately consolidated with an ex parte rule-

making proceeding instituted to declare such a policy.

4. That policy-making proceedings be initiated by the commission en banc, either on its own motion, with or without petition, or on the recommendation of the chairman, the secretary, the executive commissioner, or any three commissioners. The officers of the commission and the directors of the bureaus should be directed to submit proposals for the initiation of such proceedings."

With the release of the reports on Nov. 9, the ICC issued a statement saying the advisory committee's recommendations "already are under active consideration" with a view to adopting those "that promise to improve organization and functioning of the Commission." As to the BA&H recommendations, the Commission said these will be given "similar consideration."

Editors Afield

SAO PAULO, BRAZIL

Inter-terminal fast, intra-terminal slow—this seems to be a travel rule of general application, almost everywhere. You go from New York to Brasilia in one jet hop in 8-½ hours and then unload and put in 1-½ hours, getting through immigration and customs. If you go to New York from Sao Paulo, the bus for the airport leaves the center of town 3-½ hours before the plane is scheduled to depart. You put in about 25% of your travel time on the ground.

It's just like the mail service in the U.S.—they take it like lightning through the air and then deliver it when they feel like it (once a day now, compared to three times a day back in the twenties).

The Pan-American Railway Congress I've been attending down here is the fourth such function I've sat in on—and some of the delegates I've seen here have been at the other three, too. Gradually, a few Americans with railroad connections, like myself, are getting well acquainted with our opposite numbers in several of the Latin-American countries.

It seems to me that international friendship and understanding is just as much advanced when railroaders or doctors or engineers or labor union officers know their opposite numbers in other countries —as when chiefs of state become similarly acquainted.

Railroads are big and important in Brazil. I was expecting to see a lot of 4-wheel cars with vacuum brakes, or no continuous brakes at all. I was happily fooled. I have seen no such jerk-water freight cars here at all, although there are doubtless some of them back in the hinterland.

All that I have seen have standard trucks (many of them of the arch-bar variety, to be sure); and pneumatic brakes and automatic couplers. Freight cars (except tank cars) are smaller than ours on the average, but passenger cars equal ours in every respect. I even suspect Brazil's proportion of passenger cars that are post-war construction may exceed our own ratio.

There are some Budd-designed suburban cars on the Santos-Jundiai line which have the same exterior dimensions as the cars on the PRR's Congressional.

When it comes to suburban traffic, there's nothing in the U.S. to compare with that being handled at Pedro II station in Rio or Luz station in Sao Paulo.

Incline planes still operate on the Santos-Jundiai line. There are five inclines where they let two or three cars down on one track and pull two or three up on the other track, by cable. All the power needed is that to make up for the weight and friction difference between the nearly-balanced loads.

The cars are protected on the down side by a dummy-style steam locomotive called a "brake"—and it is a brake, too, because it can grab onto the rails if a cable should break. At the downside of these engines, there is a row of seats for spectators. Frisco's Clark Hungerford was one of the riders and he confessed:

"It's the biggest thrill I've had around a railroad since I was 11 years old and my dad let me ride the seat box of an engine between stations."

Bob Coutts is a 100% railroader —I mean President Coutts of the Train Dispatchers, one of the delegates with whom I have become well acquainted. I found that he, like myself, is an old Rock Islander. Moreover, he likes to "railroad" orally (as who doesn't, who has his heart in this business). And a fellow that has worked all over his railroad, as Bob has done, has got plenty to contribute to railroading of the anecdotal variety.

VP Jim Newell of the PRR is a photographer, and how! He has been taking colored movies for around 30 years and on this trip he reeled off 4,000 ft. If he hasn't got the best railroad travelogue of Argentina and Brazil ever filmed, I'll miss my guess. And he is a conscientious photographer, too—not casual about it at all, as so many amateurs are. He has been constantly looking for the interesting shots, no matter how hard they have been to get.

We Americans are inadequate linguists. It isn't that we can't learn foreign languages, either. Fellows like Loyd Kiernan (retired vp of the B&M), who have been in Brazil for some time, have got an adequate command of the local language. The same is true of U.S. suppliers stationed down here.

But find an American who has never lived in a Latin country who knows any Spanish or Portuguese —and you've got your hands on a rare bird.

On the other hand, you hardly ever run into a Latin with any pretentions to education who doesn't have, at least, a reading knowledge of some language other than his own—and often it is English.

Benjamin Mendez, general manager of the National of Mexico, apologizes for his English, but he needn't, for he speaks it fluently, and so do many of his colleagues on the Mexican railroads (a far larger number, I am sure, than U.S. railroaders who can speak Spanish). Practically all of the important officers of the Brazilian railways that I have run into have some command of English. Some of them use it with great skill.

One great service U.S. railroads that can afford it could do to further Latin-American understanding would be to reward selected officers who will master Spanish in the meantime, with the opportunity to attend the next Pan-American Railway Congress, scheduled for Mexico in 1963.

Jim Lyne

Karl C. Shults
Southern

Leason L. Waters
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James A. Johnson
Southern

J. Walter Wallace
Am. Brake Shoe

George H. Bailey
Am. Brake Shoe

People in the News

ALTON & SOUTHERN.—Gene R. Warren, commercial agent, New York, appointed general agent, San Francisco, Calif., a new agency. **Robert A. Gibeault** succeeds Mr. Warren at New York.

ATLANTIC COAST LINE.—S. C. King, superintendent terminals, Sunny Point, N. C., appointed assistant superintendent, Wilmington, N. C. **S. R. Chinnis,** road foreman of engines, Rocky Mount, N. C., appointed trainmaster, Richmond, Va.

O. C. Rose appointed general agent, Atlanta, Ga.

Thomas Fuller, assistant to president, given additional duties as manager mail traffic, Jacksonville. In matters involving mail handling, Mr. Fuller will report to the vice president-traffic.

BALTIMORE & OHIO.—Kent P. Shoemaker, assistant trainmaster, Gassaway, W. Va., appointed trainmaster, Cowen, W. Va.

BURLINGTON.—J. C. Jensen, general freight agent, Colorado & Southern, Denver, appointed assistant freight traffic manager (commerce), Burlington, Chicago, succeeding **H. W. Hotaling.**

CANADIAN PACIFIC.—E. M. Scully, general freight agent, system—rates and divisions, appointed assistant freight traffic manager, system—rates and divisions. **K. D. Carmichael,** assistant to freight traffic manager, named general freight agent—rates and divisions, Eastern and Atlantic regions. **D. A. L. McDonald,** assistant general freight agent—rates, appointed assistant to freight traffic manager, system—rates and divisions. **A. S. Fleet,** assistant general freight agent—rates, named assistant general freight agent—rates and divisions, Eastern regions. **G. E. White** appointed assistant to general freight agent, Eastern and Atlantic regions. All have headquarters at Montreal, Que.

CENTRAL OF GEORGIA.—W.M. Whitehurst, signal engineer, appointed to the new position of superintendent of communications and signals, Macon, Ga. **J. H. Walton,** assistant superintendent communications, appointed communication engineer, Macon. **D. R. House,** assistant signal engineer, promoted to signal engineer.

CHESAPEAKE & OHIO.—S. R. Secor, chief purchasing and stores officer, Cleveland, retired Oct. 31. **William J. Eck,** administrative planning officer, purchasing and stores department, Cleveland, appointed general manager, purchasing and stores department. **Harold W. Brewer,** general purchasing agent, named director of purchases. **R. J. Burns,** assistant general purchasing agent, appointed purchasing agent. **E. S. Garnett,** assistant purchasing agent, named senior assistant purchasing agent. Positions of general purchasing agent, assistant general purchasing agent and assistant to general purchasing agent abolished.

LeRoy Hurt, superintendent of the computer center at Cleveland, Ohio, appointed assistant auditor of revenues there. **E. E. Beasley,** assistant superintendent, computer center, succeeds Mr. Hurt.

T. W. Grose, terminal superintendent, Chicago, appointed superintendent, Saginaw (Mich.) division, succeeding **C. L. McGrain,** who retired Oct. 31. **K. W. Bird,** assistant division superintendent, Grand Rapids, Mich., named assistant superintendent—trainmaster, Cincinnati-Chicago division, Peru, Ind., succeeding **J. P. Charters,** who succeeds Mr. Grose at Chicago. **J. R. Cary, III,** succeeds Mr. Bird. **H. C. Kitchen** appointed assistant to superintendent transportation, Detroit, Mich., succeeding **W. G. Sechler,** who replaces **E. C. Drews,** also assistant to superintendent transportation, retired.

CHICAGO & ILLINOIS MIDLAND.—Claude E. Bramlet appointed assistant freight traffic manager, Springfield, Ill.

GULF, MOBILE & OHIO.—L. W. Swann, assistant to vice president and comptroller, promoted to general auditor, Mobile, Ala., succeeding **C. W. Peterson,** who retired Oct. 31. **G. T. Bennett,** auditor property accounts, succeeds Mr. Swann.

C. F. Groom, eastern traffic manager, Washington, D. C., will be located at Room 408, 500 Fifth Avenue, New York, effective Nov. 1. **R. F. Hobby,** division freight traffic manager, New York, retired. **F. E. McCann** named district freight traffic manager, New York.

ILLINOIS CENTRAL.—Kenneth T. McDermott appointed district passenger agent, Chicago, to succeed **Charles P. McEvilly,** retired.

NEW HAVEN.—William E. McLennan, assistant general accountant, New Haven, Conn., appointed general accountant. **Francis M. McNamara,** accountant, named auditor of Grand Central Terminal accounts. **Joseph A. Levasseur,** accountant, appointed director of audits and methods, succeeding **William H. Beebe** (RA, Oct. 24, p. 30).

NEW YORK CENTRAL.—R. V. Brinkworth, terminal superintendent, East Buffalo, N. Y., appointed division superintendent, Boston & Albany division, Springfield, Mass., succeeding **E. P. Frasher,** named superintendent, Syracuse division, Rochester, N. Y., replacing **L. H. Stecker,** resigned.

C. M. Smith appointed senior methods and production engineer, New York. **R. A. Johnson** named assistant engineer there.

Robert S. Reebie appointed director of industrial planning, New York. Mr. Reebie was formerly with the management consultant firm of A. T. Kearney & Co.

PENNSYLVANIA.—John A. Prince, district freight sales manager, New York, retired Oct. 31.

R. B. Pierson named supervisor, service bureau, Chicago.

PITTSBURG & SHAWMUT.—Walter E. Buhite, general manager, elected executive vice president, Kittanning, Pa.

RAILROAD PUBLIC RELATIONS ASSOCIATION.—J. N. Ragsdale, advertising manager, Association of American Railroads, Washington, D. C., elected secretary-treasurer, RPRA, succeeding **Harold H. Baetjer,** resigned.

SEABOARD.—J. D. Makinson, passenger traffic manager, Richmond, Va., retired Nov. 1. **William H. Gray,** assistant to general passenger agent, Richmond, appointed general passenger agent there and all correspondence pertaining to passenger rates, commerce and baggage, heretofore directed to Mr. Makinson, should be addressed to Mr. Gray. **Roland D. Tankersley,** city passenger and ticket agent, Raleigh, N. C., promoted to chief rate clerk, Richmond, succeeding **Edward O. Brooks,** who succeeds Mr. Gray.

SOUTHERN.—Karl C. Shults, general superintendent transportation, Washington, D. C., appointed assistant vice president. **Leason L. Waters,** general superintendent transportation, named manager transportation services. **Donald D. Strench,** superintendent, Atlanta, Ga., appointed superintendent transportation services. **James A. Johnson,** superintendent, Selma, Ala., named superintendent transportation services. **Clark Hungerford, Jr.,** superintendent, Birmingham, Ala., transferred to Alexandria, Va., succeeding **Thomas D. Moore, Jr.,** who succeeds Mr. Strench. **Edward B. Burwell,** assistant superintendent, Atlanta, promoted to superintendent at Birmingham, succeeding Mr. Hungerford. **Robert A. Wharton,** assistant superintendent, Knoxville, Tenn., promoted to superintendent, Selma, succeeding Mr. Johnson. **William A. Sharp,** trainmaster, Greensboro, N. C., transferred to Birmingham.

Supply Trade

J. Walter Wallace has been named general sales manager, National Bearing Division, **American Brake Shoe Co.,** Meadville, Pa. **George H. Bailey** has been appointed western sales manager of that division at Oakland, Calif.

You Ought To Know...

A budget sleeping car plan—coach fare plus space charges—will be inaugurated Dec. 1 by Louisville & Nashville on its Cincinnati-Memphis overnight trains. The budget car (providing bedroom, roomette and section accommodations) will operate alternate days in each direction. L&N also reports its family plan and reduced individual round-trip fare plan have been successful, will be extended through May 1961.

Tax relief in New York and Vermont has been requested by the Rutland. The two-state carrier is slowly resuming normal service after a six-week strike (RA, Oct. 31, p. 7). Action in Vermont will have to wait until the new legislature meets in January. What action will be possible in New York will not be known until after Rutland President W. I. Ginsburg confers with New York officials this week. A request for a federal loan guarantee may also be forthcoming.

Construction of cargo tanks for piggyback movement of chemicals is under study by the Committee on Tank Cars, Tank Trucks and Portable Tanks of the Manufacturing Chemists' Association, according to M. F. Crass, Jr., the association's secretary-treasurer. He told the Association of British Chemical Manufacturers in Harrogate, England, that the committee is also considering a bottom outlet design for cargo tanks in corrosive liquid service.

RPI annual meeting and dinner is scheduled for the Hotel Commodore in New York Nov. 17. Eight proposals of the resolutions committee will be up for member action, including recommendations on economic studies, railroad mergers and consolidations, foreign trade, containerization, and equipment-leasing arrangements.

Three lubricators—the Premier, Wikit and Easy-Flo—have been granted conditional approval effective November 15, 1960, by the AAR Mechanical Division.

Third-quarter 1960 produced a "virtual explosion in demand for lease of new cars," North American Car Corp. President E. C. R. Lasher declared last week—as he reported operating revenues and earnings at record levels for the first nine months of the year. As a result, he said, North American will have added 1,386 new cars to its fleet by year's end. Among the bright spots: Growth of NITX, which has tripled in membership and been broadened to include covered hopper cars, insulated box cars and multi-level rack flat cars for auto transport. Current studies involve "several major improvements in piggyback and containerization equipment developed by leading foreign and domestic manufacturers."

Max Swiren, formerly chairman, executive committee of the M&StL, has assumed presidency of MSL Industries, Inc., with headquarters at Chicago, following consolidation of M&StL into the Chicago & North Western. A. W. Schroeder, former M&StL president, becomes a director of MSL.

Railway Systems and Management Association has scheduled two seminars for December: Development of Performance Standards and Appraisal of Management Personnel, Dec. 5 and 6, and Costing Railroad Operations for Profit Planning, Dec. 8 and 9. Both seminars will be held at the Hotel Knickerbocker, Chicago.

George M. Crowson, assistant to the president, Illinois Central, has received a citation for 40 years of distinguished service in public relations from the Public Relations Society of America. Mr. Crowson assisted in setting up IC's PR program in 1920 and has headed the operation since 1925. He was president of PRSA in 1955, has also served as president of the Railroad Public Relations Association and the American Railway Magazine Editors Association.

Classification principles "lose their significance" when it comes to fixing railroad rates on bases which will meet the competition of private carriage. That's what the ICC's Division 3 said in approving Plan III piggyback rates on groceries and store supplies, frozen fruits and vegetables, and fresh meats from Kansas City to Wichita and St. Louis. The division's report (in No. 3321) comes at a time when the entire Commission has under consideration the proposed report wherein Examiner George A. Dahan has recommended condemnation of numerous Plan III and Plan IV rates. Under the former plan, railroads transport shipper-owned or leased trailers. Under Plan IV, shippers furnish the flat cars as well as the trailers.

Soo Line trains #13 and #14, providing daily service between the Twin Cities and Portal, N. Dak., may be discontinued after the first of the year. Dwindling patronage and loss of revenue from Canadian mail (CP connection at Portal for Moose Jaw, Sas., will be dropped Dec. 31) will justify attempt to end this service.

The sixth annual Transportation Management Program sponsored by the Graduate School of Business of Columbia University will be held at Arden House, Harriman, N. Y., Jan. 15-20. The program, under the direction of Professor Ernest W. Williams, Jr., is for executives at the policy-making level. Registration will be limited to 60. Inquiries may be addressed to Hoke S. Simpson, director of executive programs, Graduate School of Business, Columbia University, New York 27, N. Y.

The 1960 Seley Awards for distinguished service to the field of transportation will be presented Jan. 18 to E. F. Hamm, Jr., publisher of Traffic World. The awards—presented by the Transportation Association of America and made possible by the Seley Foundation of New York—include a gold medal, a $1,000 transportation scholarship to the university or college of the winner's choice, and an additional $1,000 to the same institution.

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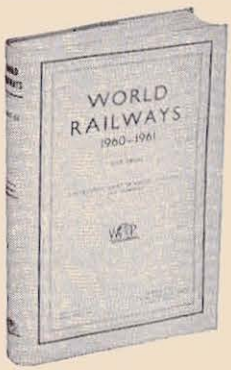

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Within recent weeks you have seen public officials, in an emergency conference, endeavoring to prevent the collapse of a major New England railroad. What has already happened in your own New England can all too easily develop elsewhere, unless remedial measures are promptly initiated.

In the three months of campaigning prior to November 8, two broad issues were brought into focus—foreign policy and the state of the U.S. economy. The two are closely related. No nation can give effect to a strong foreign policy if it is beset by a poorly functioning domestic economy.

This paper is in full agreement with those who believe the U.S. cannot stand for any weakening in domestic strength. We are aware, however, as many others do not appear to be, of an acute and dangerous threat to the strength of our present business economy. We are not talking now about Russian economic competition, important though that may be. Rather, what concerns us is a common-sense worry arising from the fact that the U.S. is allowing some of the basic fibers of its economic strength to become withered and frayed.

No nation as large and as diverse in industrial capacity as the U.S. should let the things happen in transportation that have been in process, almost without interruption, for 30 years.

Government has injected itself into the transportation picture as a kind of one-eyed arbiter. It has favored some forms of transport over others. Intervention has been unequal and biased. Policies have been adopted to stimulate the growth of air, highway and waterway transportation by aggressive promotion and spending—while railroads, with rare exception, have been reined back to the same hitching post where they've been forced to stand for decades.

We could portray the situation in terms of "fair play" for railroads—but never mind that. Just look at it from the standpoint of the nation's continuing need for railroad service—and satisfy yourself whether the situation of these essential carriers is or is not being jeopardized by present government treatment.

A strong, well-rounded transport network is vital to the strength and growth-capacity of the American economy. To permit each transportation method to take its proper place in the overall transportation system, the country should have either equal government intervention in behalf of each type of transportation, or, better yet, no intervention whatsoever. We offer the following considerations as worthy of your attention between now and January:

- Over the past five years, according to the compilation of the First National City Bank of New York, railroads have averaged a return of a little over 4% on their net assets—while the manufacturing industry has averaged better than 12% and the electric utilities almost 10%. With such earnings comparisons, it is perfectly obvious what the relative standing of railroads is with investors. Large parts of the railroad industry are confronted with starvation in supplies of new capital for plant renewal and improvement. A few of them are scraping the bottom of the barrel to meet payments of wages and taxes.
- The measure of the price of inflation in the past 15 years is the fact that a new freight car today costs more than twice what it did a few years ago—so railroads have to raise new capital, not for expansion, but just to keep their plant intact. Seeing the need of the nation for railroads and the railroads' need for capital, wouldn't it be sensible to allow railroads depreciation charges consistent with this equipment price pattern?
- With vast fleets of motor carrier and waterway vehicles plying their trade without any regulation whatsoever, is it too much to ask that these carriers be regulated, too? Either that, or regulated carriers be freed of restrictions that confine them?

These are just a few of the main areas worthy of your attention. We could easily add to the list if you are interested. We hope you will be, because the situation we've outlined, bad as it is, could be quickly set to rights by intelligent and courageous action by the Administration. We're hoping, Mr. Kennedy, that that's the kind of leadership you're going to provide. There's no better place for you to show your mettle than on this transportation question.

THE EDITORS

Significant City

The historic Boston Tea Party was a dramatic protest against "taxation without representation."

In modern Boston, with its great educational institutions and musical organizations, its wholesale market activities and diversified commerce and industry, the only "tea parties" are of a social nature.

Here, as nationally, the electric utilities and the three major railroads serving the area contribute importantly to area development.

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CONSOLIDATING 7 LOCATIONS EXTENDING cTc

Annual savings total $109,666

In 1954, the Delaware and Hudson retired a mechanical interlocker at SX Tower, Hudson, Pennsylvania. A modern, all-relay electric interlocking replaced the obsolete plant.

Next, in orderly, planned sequence, controls for other locations were brought into the Hudson control office, with centralized traffic control replacing timetable and train order operation. Now, panels for Carbondale and for Miners Mills, Plains Jct., and Plymouth are nearly ready for installation. Savings on these—and on older additions—have been calculated. The results are an impressive tribute, not only to the well known economies of cTc, but to the farsighted planning of the D&H.

$34,750 ANNUAL SAVING
$31,433 SALVAGE

Coded control from Hudson, now being installed, will eliminate hand switching and delays at Carbondale. With cTc operation between Carbondale and WC Cabin (WC is controlled from Oneonta) 7837 feet of unneeded siding and yard track are going out of service.

$20,798 ANNUAL SAVING
$75,865 SALVAGE

cTc operation between Scranton and Minooka Jct. eliminated need for replacing several miles of flood damaged trackage. In addition, two open offices were retired (one, an office on a neighboring road, is not included in these savings).

INTERLOCKING EXPANDED TO cTc OFFICE

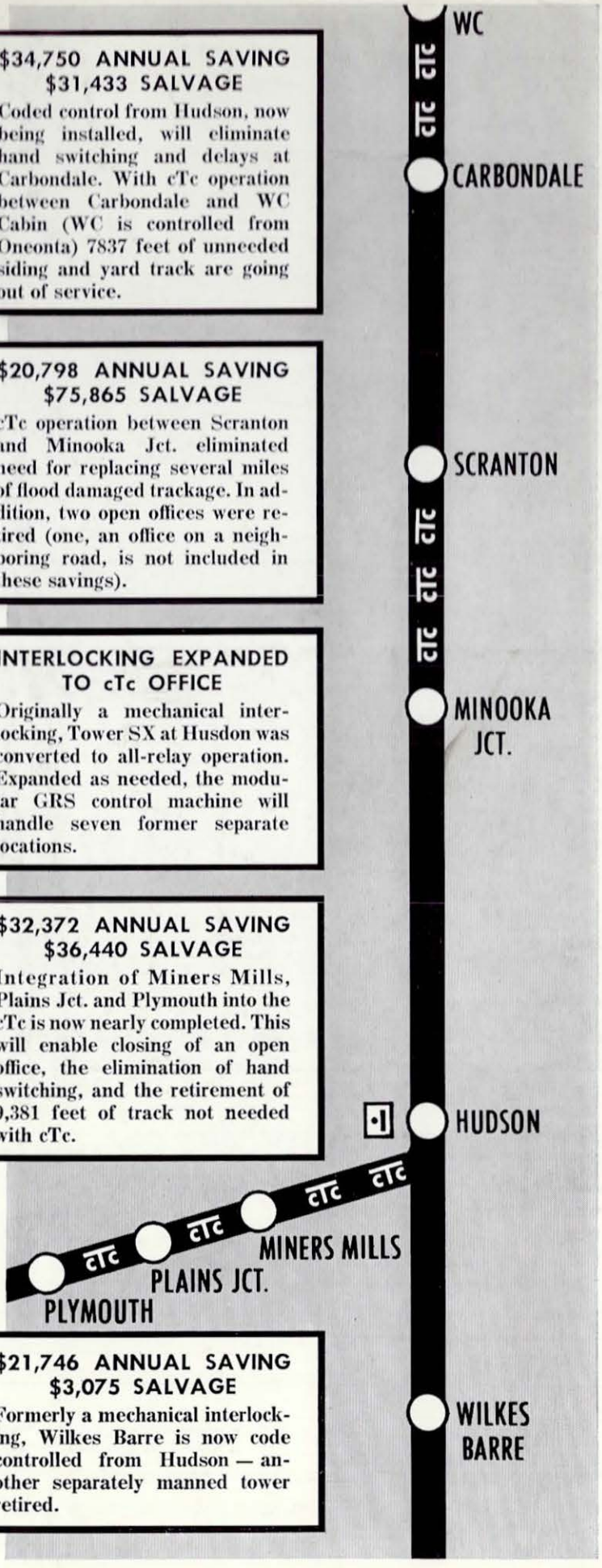
Originally a mechanical interlocking, Tower SX at Husdon was converted to all-relay operation. Expanded as needed, the modular GRS control machine will handle seven former separate locations.

$32,372 ANNUAL SAVING
$36,440 SALVAGE

Integration of Miners Mills, Plains Jct. and Plymouth into the cTc is now nearly completed. This will enable closing of an open office, the elimination of hand switching, and the retirement of 9,381 feet of track not needed with cTc.

$21,746 ANNUAL SAVING
$3,075 SALVAGE

Formerly a mechanical interlocking, Wilkes Barre is now code controlled from Hudson — another separately manned tower retired.



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